

[First Hit](#) [Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)**A** ✓**End of Result Set**☐

Generate Collection

Print

L3: Entry 1 of 1

File: USPT

Dec 1, 1998

US-PAT-NO: 5845256

DOCUMENT-IDENTIFIER: US 5845256 A

TITLE: Interactive self-service vending system

DATE-ISSUED: December 1, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pescitelli; John B.	Fort Lee	NJ	07024	
Schuman; William Sam	Garfield	NJ		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Pescitelli; John B.	Staten Island	NY			04

APPL-NO: 08/ 971763 [PALM]

DATE FILED: November 17, 1997

## PARENT-CASE:

This application is a continuation of application Ser. No. 08/436,642 filed MAY 8, 1995 now abandoned which is a continuation of application Ser. No. 08/108,539, filed Aug. 19, 1993, now abandoned.

INT-CL: [06] G06 F 17/60

US-CL-ISSUED: 705/4; 705/16, 235/381, 364/479.05

US-CL-CURRENT: 705/4; 235/381, 700/235, 705/16

FIELD-OF-SEARCH: 705/1, 705/4, 705/16, 705/17, 705/21, 705/24, 235/375, 235/380, 235/381, 235/383, 364/479.03, 364/479.05

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search All

Clear

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>Re32115</u>	April 1986	Lockwood et al.	
<input type="checkbox"/> <u>4276598</u>	June 1981	Inoue et al.	395/224
<input type="checkbox"/> <u>4359631</u>	November 1982	Lockwood et al.	235/381

<input type="checkbox"/>	<u>4491725</u>	January 1985	Pritchard	
<input type="checkbox"/>	<u>4493038</u>	January 1985	Bovio et al.	395/224
<input type="checkbox"/>	<u>4567359</u>	January 1986	Lockwood	235/381
<input type="checkbox"/>	<u>4648037</u>	March 1987	Valentino	
<input type="checkbox"/>	<u>4718009</u>	January 1988	Cuervo	
<input type="checkbox"/>	<u>4750119</u>	June 1988	Cohen et al.	
<input type="checkbox"/>	<u>4750121</u>	June 1988	Halley et al.	
<input type="checkbox"/>	<u>4825053</u>	April 1989	Caille	
<input type="checkbox"/>	<u>4831526</u>	May 1989	Luchs et al.	364/401
<input type="checkbox"/>	<u>4845636</u>	July 1989	Walker	
<input type="checkbox"/>	<u>4903815</u>	February 1990	Hirschfeld et al.	194/205
<input type="checkbox"/>	<u>4965437</u>	October 1990	Nagai	
<input type="checkbox"/>	<u>4965438</u>	October 1990	Murofushi	
<input type="checkbox"/>	<u>4969094</u>	November 1990	Halley et al.	
<input type="checkbox"/>	<u>4970655</u>	November 1990	Winn et al.	364/479
<input type="checkbox"/>	<u>4972463</u>	November 1990	Danielson et al.	
<input type="checkbox"/>	<u>4975840</u>	December 1990	Detore et al.	364/401
<input type="checkbox"/>	<u>4977595</u>	December 1990	Ohta et al.	
<input type="checkbox"/>	<u>5013897</u>	May 1991	Harman et al.	
<input type="checkbox"/>	<u>5160076</u>	November 1992	Ford	
<input type="checkbox"/>	<u>5160176</u>	November 1992	Ford	285/165
<input type="checkbox"/>	<u>5191522</u>	March 1993	Bosco et al.	361/401
<input type="checkbox"/>	<u>5223677</u>	June 1993	Kapp et al.	178/18
<input type="checkbox"/>	<u>5448044</u>	September 1995	Price et al.	235/380

## OTHER PUBLICATIONS

Everest, Database Management, McGraw Hill, pp. 745-746. \*  
Everest, Database Management, McGraw Hill, pp. 745-746, 1986.

ART-UNIT: 271

PRIMARY-EXAMINER: Weinhardt; Robert A.

ATTY-AGENT-FIRM: Goldberg; Richard M.

## ABSTRACT:

A system for vending insurance policies includes stand-alone, interactive self-service terminals coupled to a central office over a communication link. The terminals are normally off-line, but periodically are placed on line for transmitting data to, and updates from, the central office. The terminals, which include a microprocessor, data storage and printers, are programmed to conduct a dialogue with a customer to establish a customer's eligibility, as to age and underwriting criteria, for a policy, quoting premiums, and soliciting a purchase

decision. If purchase is elected, the customer's credit is checked and, if approved, a policy application is printed. In one embodiment, customer and company copies are printed and delivered to the customer who is instructed to keep the customer copy, sign the company copy, and direct the signed copy to the company. In a second embodiment, a signature digitizing module is used. The customer is instructed to sign on a pad of the module which digitizes and stores the signature. One copy of the application is printed and delivered to the customer and a signed copy is electronically transmitted to the company over the link or a signed copy is printed internally and kept for later pickup by the company. The terminal stores a lookup table as a continuous data stream, cuts up the data stream, and assembles words corresponding to the customer's age and a chosen coverage option. The customer then selects a term option.

16 Claims, 16 Drawing figures

[Previous Doc](#)

[Next Doc](#)

[Go to Doc#](#)

## about epsa's positions

### principles

Code of Ethics | Environmental Principles | Market Mitigation Principles



## Code of Ethics and Sound Trading Practices for Electric Power Suppliers

### Preamble

This Code of Ethics and Sound Trading Practices (Code) defines and reaffirms the values, principles and internal controls that electric power supply companies must follow in conducting their business activities. The Code is intended to complement the internal principles and practices of each individual company and to guide companies as they supply power, manage risk, provide market liquidity and report financial results. Compliance with the Code allows companies to assure their customers, investors, legislators, regulators, the public and other market participants that their business activities are, and will continue to be, conducted with integrity. In addition, assurance is given that unlawful and unethical trading practices are not tolerated, that public disclosures of trading information are accurate, and that companies will abide by these ethical standards and maintain sound trading practices.

Clear, consistent and well-constructed market rules also are necessary. Without good rules, the strongest commitment to ethical standards will not result in the market efficiencies needed to provide maximum benefit to consumers. Each company adopting this Code commits to work with regulators, policy makers and other market participants to develop such rules and standards, thereby strengthening the competitive markets necessary to power the economy and provide ongoing value to consumers.

Above all, each electric power supply company adopting this Code reaffirms its commitment to excellence, professionalism and unwavering ethical conduct.

### I. Ethical Standards

#### Core Value: Integrity

Conducting business activities with integrity is the essence of ethical conduct. Integrity means conducting business activities in an honorable and principled manner consistent with the ethical standards and sound trading practices set forth herein.

#### Ethical Standards

Electric power suppliers will:

1. Conduct their business in accordance with all applicable laws, regulations, tariffs and rules, and in good faith, and with a commitment to honest dealing.
2. Not engage in fraudulent behavior.
3. Honor the terms and conditions of their contracts.

4. Engage only in transactions with legitimate business purposes, such as managing business risk or that otherwise have economic substance. In no event will companies engage in any transactions intended to boost revenues or volumes artificially, or intended to manipulate market prices.
5. Not collude with other market participants to affect the price or supply of power, allocate territories, customers or products, or otherwise unlawfully restrain competition.
6. Cooperate with transmission system operators in the implementation of system rules and reliability requirements, and manage the physical operation of supply resources and the scheduling of power transactions in a manner that is consistent with the reliable operation of the transmission grid.
7. Adopt, adhere to, and enforce risk management policies and structures that are designed to ensure that power-trading activities are conducted in accordance with this Code.
8. When reporting financial results, do so in a manner that fairly presents the financial health of the company, consistent with applicable accounting principles and applicable securities and other requirements.

## **II. Sound Trading Practices**

**Core Value: Adherence to Sound Trading Practices and Principles**  
Electric power markets reflect the constantly changing dynamics of supply and demand. Efficient business operations in such an environment demand practices that can manage risk and discover market prices. Such practices must be consistent with the guiding Ethical Standards of this Code.

### **Sound Trading Practices Standards**

Electric power supply companies will act in accordance with these standards of sound trading practices:

1. **No unlawful withholding.** Companies will operate and schedule generating facilities, undertake maintenance, declare outages, and commit or otherwise bid supply in a manner that complies with the rules, regulations and guidelines of the applicable power market. Moreover, companies will not engage in such activities or misrepresent the operational capabilities of generation facilities in a manner expressly calculated to affect market prices by unlawfully withholding available supply from the market in order to create artificial supply shortages. However, companies may decide not to run their generating plants or bid and schedule such resources or other power supplies when such actions would risk jeopardizing public health and safety or damaging their facilities, or in order to comply with facility licensing, environmental or other legal requirements, or when such actions would be uneconomic under the given circumstances.
2. **No creation of artificial congestion.** Companies will not engage in transactions or schedule resources with the intent of creating congestion to manipulate prices or to jeopardize the security of

dispatch operations.

3. No non-performable reliability transactions. Companies will not offer reliability services to the market that they intend not to provide.
4. No "wash" trades. Companies will not arrange and execute simultaneous offsetting buy and sell trades, i.e. with the same counterparty and price, commodity, location and quantity terms, with an intent to artificially affect reported revenues, trading volumes or prices.
5. No misrepresentative trading. No trading will be conducted for the purpose of misrepresenting the financial condition of the organization.

### **III. Information Disclosure and Documentation**

Core Value: Candid and Complete Disclosure

Markets depend on trust in the accuracy of market information and transparency of market behavior and that the confidentiality of commercially sensitive information entrusted to each company will be maintained. Information Disclosure and Documentation Standards  
Electric power suppliers will:

1. Provide market and transaction information to regulators and market monitors in compliance with all applicable rules and requirements and continue to cooperate with regulators and market monitors as reasonably necessary to assist in their understanding of market operations.
2. When reporting financial results, do so in accordance with applicable accounting principles and in a manner that fairly presents the financial health of the company.
3. Ensure that any information disclosed to the media, including market publications and publishers of surveys and price indices, is accurate and consistent.
4. Maintain and adhere to internal procedures designed to ensure that all trades are properly documented in a timely fashion and that no trades are concealed or misrepresented.
5. Maintain documentation on all transactions for an appropriate period of time as required under applicable laws and regulations.

### **IV. Compliance**

Core Value: Comprehensive Corporate Compliance

Each company subscribing to this Code will have a compliance program designed to ensure appropriate, timely and ongoing review of power trading practices and compliance with this Code.

Compliance Standards Electric power suppliers' compliance programs will:

1. Provide for proper training of personnel on the provisions of this

Code and the company's risk management policies.

2. Maintain internal standards, policies, procedures and controls to promote compliance with this Code, and with other standards of sound trading practices and market commitments, and provide for the periodic internal or external audit of such standards, policies, procedures and controls.
3. Provide an environment that encourages employees within the trading organization to engage in safe and confidential discussions and to disclose to senior management any trading practices that might violate this Code.
4. Establish clear lines of accountability for the company's power trading practices, including provisions relating to the responsibilities of corporate officers, with appropriate oversight by the Board of Directors or other senior corporate management committee.

TOP

---

1401 New York Avenue, NW, 11th Floor, Washington, DC 20005-2110, (202)628-8200 fax (202)628-8260  
Questions and Comments contact [epsainfo@epsa.org](mailto:epsainfo@epsa.org). Photographs thanks in part to NREL/PIX.

about epsa

overview



Want to request information about EPSA? Click here!

Full Competition: EPSA's Focus

EPSA: The Industry's Voice in Washington

EPSA's International Impact

EPSA Information: Timely and Focused

EPSA: Crafting the Industry's Public Policy Agenda

## Overview

EPSA's mission is to advance the interests of its members: competitive generators, power marketers and other suppliers. EPSA advocates domestic and international policies that will result in a fully competitive electric power supply marketplace. EPSA supports the development of a market in which existing commitments such as independent power contracts are honored and in which all customers have a choice of electric suppliers by a date certain.

EPSA is the national trade association representing competitive power suppliers, including independent power producers, merchant generators and power marketers. These suppliers, who account for more than a third of the nation's installed generating capacity, provide reliable and competitively priced electricity from environmentally responsible facilities serving global power markets. EPSA seeks to bring the benefits of competition to all power customers.

Formed as a result of a merger between the National Independent Energy Producers and the Electric Generation Association, EPSA combines the strengths and policy successes of those two prominent organizations on behalf of the competitive power supply industry. EPSA's formation has given the competitive power supply industry the ability to speak with a single, unified voice at the global and national levels.

As the debate continues in the U.S. Congress, federal regulatory agencies, and state capitals around the country, EPSA advocates policies and positions that allow its member companies to compete aggressively for the privilege of serving electricity consumers. EPSA is confident that, as it has in other industries, such competition will bring lower prices, and more and better services for electricity customers. As such, the association will continue to play a constructive role in the intensifying congressional and regulatory debate about how to create an efficient national power market for all customers. Working in concert with the industry's state and regional associations, EPSA also participates in precedent setting regulatory and legislative proceedings in the states.

As the association's membership roster demonstrates, EPSA members include many of the premier companies involved in the generation and marketing of electricity. Today's power suppliers face complex technological, environmental, and risk management challenges. EPSA



members are responsible for some of the most innovative solutions to these challenges. Those solutions have resulted in: more efficient generating technologies that have driven down the cost of producing electricity; cost-effective environmental solutions that have resulted in significantly cleaner air and water; innovations in power plant management and maintenance that have lowered operating costs without compromising reliability; cost-saving transactions among power marketers that move electricity to where it is most needed; and new comprehensive risk management strategies that result in more competitively priced power.

The competitive power supply industry's existing accomplishments foreshadow the possibility of even greater efficiencies and savings in a fully competitive market. EPSA's goal is to bring the cost-saving benefits and innovative services its members offer to all consumers.

TOP

---

1401 New York Avenue, NW, 11th Floor, Washington, DC 20005-2110, (202)628-8200 fax (202)628-8260  
Questions and Comments contact [epsainfo@epsa.org](mailto:epsainfo@epsa.org). Photographs thanks in part to NREL/PIX.

**AEGIS News****Past Issues**[Mar 31, 2003](#)[Feb 19, 2003](#)[Jan 23, 2003](#)[Dec 19, 2002](#)[Oct 18, 2002](#)[Oct 07, 2002](#)[Sep 03, 2002](#)[Jul 31, 2002](#)[Jun 04, 2002](#)[Apr 10, 2002](#)[Mar 29, 2002](#)[Feb 25, 2002](#)[Dec 19, 2001](#)[Nov 29, 2001](#)[Nov 07, 2001](#)[Oct 22, 2001](#)**AEGIS Company News****November 07, 2001**

Dear AEGIS Members and brokers,

Please read below for news about unplanned outage coverage, a new service from AEGIS Loss Control, and expanded AEGIS structured settlement capabilities.

**Planning for Unplanned Outage**

With many Members either working on or beginning to think about 2002 risk management budgets, it's an appropriate time to discuss potential solutions for unplanned outage exposures next summer.

Depending on a company's appetite for risk and its comfort level with current weather patterns and predictions, there are several options. Self-insurance is a viable route for some, especially during summer seasons that are cooler than normal. The derivative market is another viable option, however some forward contracts may not always offer complete protection, especially if those offering the contracts are themselves affected by a failure in a major region or zone. The third possibility is an unplanned generation outage policy that provides energy price protection in the event of power generation outage and electricity commodity price spikes.

AEGIS offers an unplanned outage policy called *Power Shield*. The policy offers full indemnification for replacement energy costs (the actual loss sustained) or payment to the insured for energy sales losses resulting from the outage. Like all AEGIS policies, we are able to tailor *Power Shield* to the specific needs of a Member. One Member, for example, recently approached AEGIS regarding the renewal of a multi-part program that covered more than 20 generating plants totaling more than 8,000MW. The incumbent insurer was unwilling to consider the alternate structure that was requested by the Member upon renewal, but AEGIS was able to work within the structure the Member needed. AEGIS also tailored the coverage so that it had a single-trigger rather than the standard double-trigger, and provided an extended retention period.

For more information about unplanned outage, including specific terms and conditions, please contact Ron Bertrand at [RonaldBertrand@aegislimited.com](mailto:RonaldBertrand@aegislimited.com) or 201.521.4582.

**New Loss Control Program - "Focused Services"**

*Focused Services* is a new program that can provide a Member company with the services of an AEGIS Loss Control Professional to assist with a variety of loss mitigation activities following a risk assessment.

As budgetary pressures and changes in the workforce continue, many companies are finding it's increasingly difficult to implement effective loss control programs. This new service is intended to help provide the focus and the manpower to help correct the specific operational or public safety deficiencies identified by a risk assessment and, in turn, help prevent the occurrence of future losses.

For more information about *Focused Services*, please contact Tony Calega at [AnthonyCalega@aegislimited.com](mailto:AnthonyCalega@aegislimited.com) or 201.521.4553.

**Expanded Service Network for The AEGIS Structured Settlement Company (TASSC)**

Members now have access to a greatly expanded network of structured settlement professionals who can help them identify the structured settlement products best suited to their needs. AEGIS has formed a new alliance with Cambridge Galaher Settlements & Insurance Services which, when combined with the current AEGIS/EPS Structured Settlements Group team, provides a total of 75 structured settlement professionals throughout the U.S.

For more information about TASSC, please contact Richard Bynum at [RichardBynum@aegislimited.com](mailto:RichardBynum@aegislimited.com) or 201.521.4605.

If you have any questions or suggestions about this communication, please contact Gil Gould at

[GilbertGould@aegislimited.com](mailto:GilbertGould@aegislimited.com) or 201.521.4824. AEGIS and the AEGIS logo are service marks of Associated Electric & Gas Insurance Services, Limited.

[Back to current news](#)

AEGIS is not admitted as a licensed insurer in any US jurisdiction. Coverage is available from AEGIS only through licensed surplus lines brokers or you may approach AEGIS directly, subject to the limitations of the laws of your state. For more information, see [How To Approach AEGIS](#).

© 2001-2002 AEGIS Insurance Services, Inc. and Associated Electric & Gas Insurance Services Limited, All Rights Reserved.  
AEGIS and the AEGIS logo are registered service marks of Associated Electric & Gas Insurance Services Limited.

[Terms of Use](#)   [Privacy Policy](#)

# **COMMERCIAL PROPERTY INSURANCE**

**Linda G. Robinson, CPCU, ARM  
Jack P. Gibson, CPCU, CLU, ARM**

**International Risk Management Institute, Inc.  
Dallas, Texas**

# **COMMERCIAL PROPERTY INSURANCE**



## **Volume III**

**Boiler and Machinery • Crime • Package Policies**  
**(Volume I contains the contents and index pages for all three volumes.)**

Copyright © 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999  
by International Risk Management Institute, Inc.®

*ALL RIGHTS RESERVED. THIS BOOK OR ANY PART  
THEREOF MAY NOT BE REPRODUCED IN ANY FORM OR  
BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF  
THE PUBLISHER.*

*This publication includes copyrighted material of Insurance  
Services Office, Inc., with its permission.*

PRINTED IN THE UNITED STATES OF AMERICA

"This publication is designed to provide accurate and  
authoritative information in regard to the subject matter  
covered. It is sold with the understanding that the publisher  
is not engaged in rendering legal, accounting, or other pro-  
fessional service. If legal or other professional advice is  
required, the services of a competent professional should  
be sought."

—From a Declaration of Principles jointly adopted by a Com-  
mittee of the American Bar Association and a Committee  
of Publishers and Associations.

International Risk Management Institute, Inc.®  
12222 Merit Drive  
Suite 1450  
Dallas, Texas 75251-2276  
(972) 960-7693  
Fax (972) 960-6037

*International Risk Management Institute, Inc.,® and IRMI® are registered trademarks.*

## OVERVIEW OF BOILER AND MACHINERY INSURANCE

Boiler and machinery insurance might be more appropriately termed "mechanical and electrical equipment breakdown insurance." Boiler and machinery insurance has to do with insuring equipment that generates, uses, or transmits power. Although it is logically a type of property insurance, historically, boiler and machinery insurance developed as a separate coverage, due in large measure to the special emphasis placed on necessary engineering service and expertise, and the technical nature of the insured "objects."

### Property Policy Boiler and Machinery Exclusions

Property policies almost universally exclude the following from coverage:

- Any damage caused by explosion of steam boilers, steam pipes, steam engines, or steam turbines owned, leased, or operated by the insured
- Any damage caused by artificially generated electric current, including electric arcing, that disturbs electrical devices, appliances, or wires
- Any damage caused by mechanical breakdown, including rupture or bursting caused by centrifugal force

Notice that boiler and machinery equipment is not excluded from coverage under a property policy. Damage to boiler and machinery equipment caused by fire or windstorm, etc., would be covered by a property policy. The exclusions listed above preclude coverage for damage to any property, including but not limited to boiler and machinery equipment, resulting from the excluded perils. Income and extra expense losses associated with the excluded direct damage losses are also not covered under property policies. Boiler and machinery insurance is needed to provide coverage for these types of damages.

### Who Needs Boiler and Machinery Insurance?

Businesses that have steam equipment on their premises no doubt recognize their need for boiler and machinery insurance. Most states and many local governmental units require regular inspection of various types of boiler equipment. While a few require that the inspections be performed

by state inspectors, most will accept inspections performed by insurance company boiler inspectors. For this type of equipment, insurance is sometimes purchased as much for the inspection service as for the insurance protection. Steam boiler explosions are relatively rare, although when they do occur, they can be terribly destructive.

Even businesses with no boilers on premises may still have a significant boiler and machinery exposure. What is commonly referred to as "boiler insurance" can provide important coverage for machinery as well, i.e., both plant maintenance machinery and production machinery. Mechanical breakdowns and electrical damage losses are relatively commonplace occurrences. They are not covered under property insurance policies but can be covered by a boiler and machinery insurance policy.

Exhibit XI.D.1 lists various types of businesses and the types of machinery that they may own. This machinery may present exposures that could be covered by boiler and machinery insurance.

Many businesses that purchase boiler and machinery coverage don't think of the boiler and machinery policy when their equipment breaks down; they just get it fixed. It is believed that a great many covered accidents are never reported to the boiler and machinery insurer. This practice has undoubtedly helped to keep boiler and machinery premiums low. But it reflects a widespread lack of understanding about what kind of losses are covered under a boiler and machinery insurance policy.

Boiler and machinery insurance is essentially equipment breakdown insurance. Not every equipment breakdown is covered. Boiler and machinery insurance is not a guarantee that the insured will never again have to pay for repairs or replacement equipment. Nevertheless, many relatively commonplace but expensive equipment breakdowns are covered.

Just as there are businesses that purchase boiler and machinery insurance but never think to take advantage of it, there are also businesses that elect not to purchase boiler and machinery insurance at all, even though they do have boiler and machinery loss exposures. There are a few states that do not require inspection of steam boilers and other steam equipment. And banks that require the purchase of fire insurance seldom require the purchase of boiler and machinery insurance. For this reason, some businesses are unaware of the availability of the coverage. Others elect to rely on equipment maintenance contracts as an alternative to boiler and machinery insurance. Depending on the cost of the maintenance contract versus the cost of boiler and machinery insurance, there may be some businesses that are well served by that approach. But a business that owns equipment that could potentially damage other property is much better off with boiler and machinery insurance. The same is true of businesses that have a time element exposure associated with their machinery and equipment; maintenance contracts seldom, if ever, provide compensation for loss of use.



## EXHIBIT XI.D.1

### BOILER AND MACHINERY OBJECTS BY OCCUPANCY

★ Usually found  
☆ Occasionally found

	Heating boilers (steam boiler less than 15 lbs psi)	Pressure vessels (non-process e.g., compressed air)	Air conditioning units, systems	High Pressure boilers (above 15 lbs psi)	Process Vessels (per ASME code)	Refrigeration	Motors, generators	Emergency generators (for process)	Pumps, compressors	Production machines	Steam, gas turbines	Transformers <sup>1</sup>	Switchboards, cables, etc.
Apartment buildings	★	★	☆				☆	☆	☆			☆	★
Auto sales	★	★	★				★		★			☆	★
Bakeries	★	★	☆			★						☆	★
Banks	★	★	★									☆	★
Bottling plants	★	★	☆	☆			☆		☆	★		☆	★
Bowling alleys	★	★	★			☆						☆	★
Breweries	☆	★	☆	★	★	★	★		★	☆	☆	★	★
Brick and clay mfg.	☆	★	☆	★	★	★	★		★	★		★	★
Candy		★	★	★	★	★	★	☆	★	★		★	★
Canneries		★	☆	★	★	★	★	☆	★	★		★	★
Car washes	☆	★		☆	★		★		★				★
Cement mfg.	☆	★	☆	★	★	☆	★	☆	★	★	☆	★	★
Chemical plants (incl. plastics mfg.)		★	★	★	★	★	★	☆	★		★	★	★
Churches	★	★	☆				☆		☆			☆	★
Clothing	★	★	★	★			★		★	★		☆	★
Clubs	★	★	★			☆							★
Cocktail lounges	★	★	★			★							★
Cold storage plants	☆	★	☆			★	★		★			☆	★
Colleges	★	★	★	☆		★	★	☆	★		☆	★	★
Condominiums	★	★	☆				☆	☆	☆			☆	★
Convalescent homes	★	★	★			★	☆	★	☆			☆	★
Country clubs	★	★	★			☆	★		★			☆	★
Dairies	☆	★	★	★	★	★	★	☆	★			★	★
Department stores	★	★	★	★		☆	★	☆	★			☆	★
Distilleries	☆	★	☆	★	★	★	★	★	★	☆	☆	★	★
Dry cleaners		★	☆	★	★							☆	★
Electronics mfg.	★	★	★	★	★	★	★	★	★	★	★	★	★
Fiberglass insulation mfg.	☆	★	★	★	★	★	★	☆	★	★	☆	★	★
Flooring and roofing	★	★	★	★	★	★	☆	★	★	★	★	★	★
Flour and grain mills	☆	★	☆	☆	★		★	☆	★	★		★	★

<sup>1</sup> In small buildings, transformers are usually utility-owned.

Source: This exhibit was compiled by IRMI staff. It is based on material published by Hartford Steam Boiler Inspection and Insurance Company and Industrial Risk Insurers as well as conversations with persons knowledgeable in the field.

# EXHIBIT XI.D.1

## BOILER AND MACHINERY OBJECTS BY OCCUPANCY (cont.)

★ Usually found  
☆ Occasionally found

	Heating boilers (steam boiler less than 15 lbs psi)	Pressure vessels (non-pro- cess e.g., compressed air)	Air conditioning units, systems	High Pressure boilers (above 15 lbs psi)	Process Vessels (per ASME code)	Refrigeration	Motors, generators	Emergency generators (for process)	Pumps, compressors	Production machines	Steam, gas turbines	Transformers <sup>1</sup>	Switchboards, cables, etc.
Food processing	★	★	★	★	★	★	★	☆	★	★	☆	☆	★
Foundries	★	★	★	☆			★		★	★	☆	★	★
Funeral homes	★	★	★						☆				★
Garages	★	★					☆		☆				★
Glass products mfg.	☆	★	☆	★	★	☆	★	★	★	★	☆	★	★
Greenhouses	★	★				☆						☆	★
Groceries (whse.)	★	★	★	☆		☆	★		★			☆	★
Hospitals	★	★	★	★	★	★	★	★	★	☆	☆	★	★
Hotels and motels	★	★	★	☆	☆	★	★	☆	★		☆	☆	★
Laundries		★	☆	★	★		★		★			☆	★
Machine shops	☆	★	☆		☆		★		★	★		☆	
Manufacturing, heavy	☆	★	☆	★	★		★		★	★	★	★	★
Manufacturing, light	★	★	☆	☆	☆		★	☆	★	★		☆	★
Meat packing	☆	★	★	★	★	★	★	☆	★	★	★	★	★
Metal working	☆	★	☆	☆	☆		★		★	★		☆	★
Municipal buildings	★	★	★				☆	☆	☆			☆	★
Office buildings	★	★	★	☆ <sup>2</sup>			★	☆	★		☆	☆	★
Paper mills	☆	★	☆	★	★	☆	★	☆	★	★	★	★	★
Pharmaceuticals	★	★	★	★	★	★	★	☆	★	★	☆	★	★
Plastics working	☆	★	★	★	★	☆	★		★	★	☆	☆	★
Printing, publishing	★	★	★	☆			★		★	★		☆	★
Professional buildings	★	★	★			☆	☆	☆	☆			☆	★
Public buildings	★	★	☆				☆	☆	☆			☆	★
Pumping stations	★	★			★		★	☆	★			★	★
Refineries (oil)		★		★	★	☆	★		★		★	★	★
Restaurants	★	★	★			★	☆		☆			☆	★
Rubber mfg.	☆	★	★	★	☆	☆	★	☆	★	★	☆	★	★
Schools	★	★	☆			☆	☆	☆	☆			☆	★
Service stations	☆	★					★		★				★
Stores & shopping centers	★	★	★	☆		☆	★	☆	★		☆	★	★

<sup>1</sup>In small buildings, transformers are usually utility-owned.

<sup>2</sup>Laundry or food preparation on premises.

## EXHIBIT XLD.1

### BOILER AND MACHINERY OBJECTS BY OCCUPANCY (cont.)

	Heating boilers (steam boiler less than 15 lbs psi)	Pressure vessels (non-process e.g., compressed air)	Air conditioning units, systems	High Pressure boilers (above 15 lbs psi)	Process Vessels (per ASME code)	Refrigeration	Motors, generators	Emergency generators (for process)	Pumps, compressors	Production machines	Steam, gas turbines	Transformers <sup>1</sup>	Switchboards, cables, etc.
★ Usually found													
☆ Occasionally found													
Textile plants	☆	★	☆	★	★	★	★	☆	★	★	★	★	★
Theaters	★	★	★				☆		☆			☆	★
Tobacco mfg.	☆	★	★	★	★	☆	★		★	★	☆	☆	★
Utilities (electric)		★	☆	★			★		★		★	★	★
Warehouses	★	★										☆	★

<sup>1</sup>In small buildings, transformers are usually utility-owned.

## Direct Damage Coverage

Boiler and machinery policies provide coverage for the following types of losses resulting from an accident to an insured object.

- Damage to property of the insured, including but not limited to boiler and machinery equipment
- Expediting expenses to rush repair or replacement of the insured's damaged property
- Damage to property of others in the insured's care, custody, and control

Defense coverage in connection with the property damage liability coverage is provided in addition to the stated limit of liability. Coverage extends to objects (of the types described and insured in the policy) at newly acquired locations as well, provided that the insurer is notified within 90 days of acquisition.

## Income and Expense Coverage

Like many other kinds of property losses, a machinery breakdown or boiler explosion can interrupt operations or necessitate extra expenses to avoid an interruption. The income and expense loss exposure associated with boiler and machinery perils, such as arcing, machinery breakdown, and explosion, may be equally as significant as that associated with other perils, such as fire or windstorm. Factors to consider in evaluating the exposure include the likelihood of a boiler and machinery type loss, the importance to operations of the property exposed to boiler and machinery perils, and how long it would take for damaged property to be repaired or replaced.

Coverage for business interruption and extra expense can be added to a boiler and machinery policy by endorsement. As with property insurance, the coverage may be subject to separate limits of liability or may be part of a blanket limit. Although most boiler and machinery business interruption coverage is written on an actual loss sustained basis, some insurers offer valued business interruption coverage. Under a valued business interruption policy, the insured collects a predetermined amount for each day of fully suspended operations. If operations are only partially suspended, the insured collects a proportionate share of the per diem amount.

Boiler and machinery business interruption forms exclude ordinary payroll and must be endorsed to provide ordinary payroll coverage if desired. This is in direct contrast to business interruption coverage forms used with property policies, where the form includes ordinary payroll and must be endorsed to limit or exclude ordinary payroll coverage if desired.

Boiler and machinery business interruption coverage, like its property insurance counterpart, includes coverage for extra expense incurred to reduce or avoid an interruption to the extent that the business interruption loss is actually reduced by those expenditures.

### Distinction between Extra Expense and Expediting Expenses

In boiler and machinery insurance a distinction is made between expediting expenses and extra expenses. Expediting expenses are included as part of the basic coverage provided by a boiler and machinery policy, and consist of the cost of making any temporary repairs and the cost of expediting permanent repairs or permanent replacement of damaged property. This would include such items as overtime wages and express transportation charges. Expediting expenses, although included as part of the basic coverage, are usually subject to a sublimit, such as \$5,000.

Extra expense coverage must be purchased as an endorsement to the basic policy. It is intended to cover such items as the cost of renting a temporary replacement boiler or machine and the cost of renting replacement facilities for the operations, all made necessary by a boiler or machinery type loss. Expediting expenses are also covered under an extra expense coverage endorsement, but only to the extent that they reduce the extra expense loss otherwise payable. Like its counterpart in property coverage, extra expense coverage is usually subject to a monthly limitation on loss recovery.

As mentioned above, some extra expense coverage is included as part of business interruption coverage. Provided that any expense incurred would have the effect of preventing or reducing what would otherwise have been an income loss, there is no need for the business to purchase a separate extra expense coverage form.

## Combined Business Interruption and Extra Expense

If both business interruption and extra expense coverage are desired, a combined business interruption and extra expense coverage endorsement offers both coverages subject to one limit of liability. Purchase of the combined form may be more economical than purchase of the two separate coverage forms. Coverage can be written on a valued basis or an actual loss sustained basis. Valued forms generally do not contain a coinsurance provision, whereas actual loss sustained forms generally do. The extra expense portion of the coverage is usually not subject to a monthly limitation. However, ISO's valued combined extra expense and business interruption coverage form (BM 15 29) provides both coverages subject to a monthly limit and a total limit per accident.

## Other Endorsements

Businesses storing or processing items that are subject to spoilage, such as perishable food, should consider purchasing a consequential damage or spoilage endorsement. This endorsement covers loss due to spoilage from lack of power, light, steam, heat, or refrigeration as a consequence of a boiler and machinery accident at the insured premises.

However, if the spoilage or other loss results from interruption of utility service rather than from a boiler and machinery accident on premises, a utility interruption endorsement would be needed to provide coverage. A utility interruption endorsement provides coverage for loss due to an off-premises power interruption caused by a boiler and machinery accident at the utility or a utility substation.

Refrigeration interruption coverage, available from several boiler and machinery carriers, provides coverage for three types of losses: spoilage as a consequence of a boiler and machinery accident, off-premises power interruption, and contamination by the refrigerant.

## Types of Boiler and Machinery Insurance

Boiler and machinery coverage applies to loss or damage resulting from an "accident" to an insured "object." The scope of objects covered varies depending on the type of boiler and machinery policy purchased. It is possible to purchase jurisdictional coverage only. This type of policy covers only damage caused by objects that a governmental jurisdiction requires to be regularly inspected; the objects themselves are not described. It is also possible to insure only damage in connection with specifically described individual objects that are listed in the policy.

A more common type of boiler and machinery policy provides coverage for all objects of a certain type, as specified in the policy. This type of boiler and machinery insurance is referred to as "blanket group coverage." For example, a blanket group policy might cover any and all refrigerating and air conditioning vessels and piping, plus any and all rotating electrical machines. Blanket group coverage automatically includes additional or replacement objects of the type already insured under the policy. It also eliminates the necessity of listing every individual item (within the covered object groups) to be insured and the chance that some individual objects could be uninsured as a result of having been inadvertently left off the list. However, with blanket group insurance it is crucially important to correctly identify all of the object groups for which coverage is desired. Objects not falling within the designated object groups are not covered.

Today, by far the most popular form of boiler and machinery coverage is comprehensive boiler and machinery insurance. Standard comprehensive coverage goes one step further than blanket group coverage by providing coverage for any and all objects insurable under a boiler and machinery insurance policy, with the exception of production machinery. Extended comprehensive boiler and machinery insurance adds coverage for production machines to standard comprehensive coverage. With comprehensive coverage, there is no need even to identify which groups of objects are to be covered, since all insurable objects are covered. Comprehensive boiler and machinery insurance is so broad that coverage extends to such items as small electrical appliances. (However, EDP equipment is specifically excluded from coverage under most boiler and machinery policies.) For this reason, higher minimum deductibles apply to comprehensive policies to avoid dollar trading on very small losses.

## Definition of "Insured Objects"

Generally, the following types of equipment may be insured objects under a boiler and machinery policy.

- Pressure and Refrigeration Objects—boilers, fired vessels, and electric steam generators; unfired vessels; refrigerating and air conditioning vessels and piping
- Mechanical Objects—deep-well pump units; miscellaneous machines (production machines), gear wheels and enclosed gear sets; engines, pumps, compressors, fans and blowers
- Electrical Objects—rotating electrical machines (motors and generators), transformers, and induction feeder regulators; miscellaneous electrical apparatus, solid state rectifier units
- Turbines

Noncomprehensive boiler and machinery coverage forms contain detailed definitions of covered objects. Comprehensive and extended comprehensive boiler and machinery insurance are characterized by a broad, nonspecific definition of what constitutes an insured object. This is

one advantage of comprehensive coverage. An example of a comprehensive policy's definition of "object" follows.

"Object" shall mean any boiler, any fired or unfired vessel normally subject to vacuum or internal pressure other than static pressure of contents, any refrigerating system, any piping with its accessory equipment, and any mechanical or electrical machine or apparatus which generates, controls, transmits, transforms, or utilizes mechanical or electrical power."

If the coverage is standard comprehensive rather than extended comprehensive, the above definition of "object" is limited by an exclusion of production machines.

In either case, the broad definition of "object" is qualified by a list of items that are not considered part of an object. It is important to realize that if a problem with any of these excluded items were to give rise to an accident to a covered object, the accident would be covered. These exclusions are designed only to prevent coverage for breakdown of the excluded items per se.

## Definition of "Accident"

Boiler and machinery policies cover damage resulting from accidents to covered objects. Accordingly, the policy definition of "accident" is central to the coverage provided.

The most common definition of "accident" found in boiler and machinery coverage forms is "a sudden and accidental breakdown of the object or a part thereof which manifests itself at the time of its occurrence by physical damage to the object that necessitates repair or replacement of the object." The "accident" definition is followed by a list of events which are specifically not considered to be "accidents."

- Depletion, deterioration, corrosion, or erosion
- Wear and tear
- Leakage at any valve, fitting, shaft seal, gland packing, joint, or connection
- Breakdown of any vacuum tube, gas tube, or brush
- The functioning of any safety or protective device
- The cracking of any part of a gas turbine exposed to the products of combustion

## When is Wear and Tear an Accident?

Disputes have arisen concerning whether or not breakdown coverage extends to breakdown caused by normal wear and tear. While this point will probably never be free from honest disagreement, a key in determining whether a covered accident has occurred can be found in the phrases "sud-

den and accidental" and "which manifests itself ... by physical damage to the object" in the definition of "accident" quoted above.

Damage to an object that can be observed to have occurred over a period of time, rather than suddenly, will probably not be covered. Also, the sudden breakdown of a machine will probably not be covered if there is no damage to any other property and if there is no damage to the machine itself other than the wearing out of a part which, when replaced, will enable the machine to function normally. For example, a machine that simply stops working and is found to have a worn part which needs to be replaced has not suffered an accident within the meaning of the boiler and machinery policy.

Breakdown that may have ultimately been caused by wear and tear and the passage of time, but which occurs suddenly and damages parts of an object other than the worn part, or which damages other objects or property, probably will be covered. For instance, if a single blade of a fan suddenly breaks off, bending the rest of the fan blades, even though the breakage may be the result of wear and tear, a covered accident has occurred. Both the broken blade and the resulting damage will be covered.

## Turbines

Turbines may be subject to a separate definition of "accident," depending on the type of coverage that applies. Due to their complexity and other characteristics, turbines are more difficult to insure than other types of boiler and machinery equipment. Fewer insurers will be interested in providing coverage, and those that can provide coverage will probably insist on preinspection. Occasionally the coverage provided will be other than full breakdown coverage; several lesser forms of coverage are available. For example, some forms cover only those losses resulting from explosion.

Turbines are generally more complex, sensitive, and expensive than other types of boiler and machinery equipment. They are basically used to generate electric power and are found in utility plants and in large facilities that elect to generate their own power or to supplement the power supplied by an outside source, perhaps using the waste products of their own operations. A sawmill, for example, might use a turbine to generate electricity, using wood chips and sawdust from its operations as fuel.

## Coverage Subject to Special Sublimits

Most boiler and machinery policies provide limited coverage for certain types of damages that may result from a boiler and machinery accident. These types of damages, which are discussed below, are subject to a sublimit which is part of, rather than in addition to, the basic coverage limit provided.

Water damage caused by damage to or breakdown of air conditioning or refrigeration equipment is usually subject to a special sublimit within the per accident limit of liability, ranging from \$5,000 to \$25,000. For example, water damage caused by the rupture of an air conditioning coil would



be subject to this sublimit. Water damage caused by any other type of boiler and machinery accident is not subject to this sublimit.

Also subject to a special sublimit is any damage, including contamination or pollution, caused by a hazardous substance, as declared by an authorized governmental agency. This would include such substances as PCBs, which, until quite recently, were commonly used as the cooling medium in electrical transformers and starting capacitors. The sublimit, typically \$5,000 to \$25,000, applies to costs to repair, replace, clean up, or dispose of the property.

Ammonia contamination is subject to a separate sublimit as well. Those who process or store food items may have an exposure to loss by ammonia contamination caused by a covered accident. Due to its low cost and other unique properties, ammonia is frequently used as a coolant in refrigerated warehouses and walk-in freezers. If it escapes from the piping system, it contaminates the stored food. The ammonia contamination sublimit ranges from \$5,000 to \$25,000 unless it is increased by endorsement. For coverage to apply, the leakage must result from a covered accident; damage resulting from leakage from a valve would not be covered.

## Deductibles

Noncomprehensive policies can be written with a minimum \$250 per accident direct damage deductible. Comprehensive policies usually have higher minimum deductibles, such as \$1,000, due to the very broad coverage provided. Boiler and machinery business interruption coverage is frequently subject to a waiting period or time deductible, rather than a dollar deductible. A 72-hour deductible, for example, precludes recovery for the business interruption loss occurring during the first 3 days of an interruption in production.

## Valuation

Boiler and machinery policies generally provide replacement cost coverage as a standard feature without the need for endorsement. As with property insurance, the property must actually be replaced in order to receive a replacement cost recovery; otherwise, actual cash value will apply.

## Coinsurance

Boiler and machinery direct damage insurance is not subject to coinsurance. However, actual loss sustained boiler and machinery business interruption coverage forms usually contain a 100 percent coinsurance clause, which applies to the 12 months following the accident. The boiler and machinery equivalent of the property insurance agreed amount clause is a conditional suspension of coinsurance endorsement. Most insurers will add the conditional suspension of coinsurance endorsement upon receipt of a signed business interruption work sheet. Valued business interruption coverage forms do not contain a coinsurance provision.

## Rating

Up until a few years ago, the premium for a boiler and machinery policy was based on the size dimensions or power generating capacity of the covered objects. For example, air conditioning equipment was rated on the number of BTUs, electric motors were rated on horsepower, etc. Only certain custom designed objects, such as miscellaneous machines and electrical apparatus, were rated on the basis of their value.

Today, however, virtually all boiler and machinery insurance premiums are determined using the replacement cost of the machinery and equipment as the rating basis. A value based rating system offers the advantage of consistency with other property coverages.

Coverage limits play only a relatively small part in rating boiler and machinery coverage. For example, a modest surcharge may be imposed to increase the policy limit from \$1 million to \$5 million, but the basic premium charge will depend on the type of equipment insured and its characteristics.

The choice of deductibles may significantly affect premium, depending on the type of coverage provided and the nature of the covered objects. In certain cases, higher deductibles may earn specified percentage premium credits. In others, the savings may result primarily from the fact that objects of a certain size or loss potential will be dropped from the rating schedule altogether on the assumption that the deductible will preclude loss recovery.

## Inspection Services

Inspection services are an important part of any boiler and machinery policy, regardless of whether or not the insured objects are subject to state mandated inspection. Depending on the size and complexity of the insured's equipment, most boiler and machinery insurers inspect insured objects once a year. One of the purposes of the inspection service is to detect any wear and tear or maintenance problems that would be likely to ultimately result in a breakdown or explosion if not corrected.

In light of the acknowledged importance to the insurer of regular inspections, it is interesting to note that virtually all boiler and machinery coverage forms disclaim any obligation on the part of the insurer to inspect. Insurers generally determine whether the insured's equipment includes "jurisdictional objects" (objects that are required by a governmental entity to be inspected periodically as a condition of continued operation) during their initial inspection. Appropriate reinspection dates are then scheduled, but the insurance policy in and of itself is not an inspection contract. Technically, it is the responsibility of the business operating the jurisdictional objects to see to it that the necessary inspections are made. These objects are tagged by the inspector with the date and other appropriate information, assuming their condition warrants continued operation.

## **Suspension Clause**

Boiler and machinery policies contain a suspension clause that permits the insurer to immediately suspend coverage for a particular object if an inspection reveals that it is in a dangerous condition. Although written notice to the insured is required, immediate suspension can be accomplished by means of a handwritten notice delivered to the firm's management at the time of the inspection. Once the problem has been corrected, coverage can be reinstated by endorsement.

If a jurisdictional object is found to be in a dangerous condition, the insurer's inspector, as a representative of the governmental entity requiring inspection, has the authority to immediately prohibit its continued operation.

## **Joint Loss Agreement**

A joint loss or loss adjustment agreement is an endorsement designed to prevent an insured from suffering because its boiler insurer and its property insurer disagree as to which policy should respond to a particular loss and in what amounts. For example, a steam boiler explosion and ensuing fire at a manufacturer's assembly plant would probably trigger coverage under both the manufacturer's property policy and its boiler and machinery policy. While the two insurers determine the proper apportionment of the loss, the insured manufacturer could be seriously inconvenienced by a delayed settlement.

When both policies are properly endorsed with a joint loss agreement, each insurer pays one-half of the disputed amount to the insured pending resolution of the issue. The ISO boiler and machinery loss adjustment endorsement can be found on page XI.P.89. The property policy would need to be endorsed with essentially the same provisions but with references to the boiler insurer and the fire insurer reversed. The ISO commercial property loss adjustment endorsement can be found on page VI.U.11.

It must be stressed that a joint loss agreement is not a cure-all. It does not eliminate the possibility that neither insurer covers the loss. Nevertheless, in certain situations this endorsement may prevent needless hardship, and for that reason its use is recommended.

## **Property—Boiler Package Policies**

Of course, if the same insurer provides both the property coverage and the boiler and machinery coverage, a joint loss agreement is unnecessary. Other advantages of having one insurer provide both property and boiler coverage may include the application of fewer deductibles to a given loss and the availability of a boiler and machinery limit of insurance equal to the property insurance limit.

Insurers with the facilities to provide both commercial property and boiler coverage may offer a combined property and boiler policy. Property/boiler all-risk policies are a special kind of property boiler package policy. These policies are essentially property policies with the boiler exclusions deleted.

## Choosing Limits

Many boiler and machinery insurers offer a boiler and machinery limit equal to the property limit. This is an important advantage for businesses that own true boiler equipment or other equipment which could potentially damage an entire facility in the event it should ever explode.

Otherwise, boiler and machinery limits are commonly offered and purchased in round numbers, such as \$1 million, \$5 million, or \$10 million. Those whose boiler and machinery exposure stems principally from potential breakdown of machinery will probably find such limits adequate to cover the maximum foreseeable cost of equipment repair or replacement. Keep in mind that premium will be based primarily on the objects themselves, not the limit chosen.

The business interruption and extra expense exposure associated with the boiler and machinery perils must be considered when selecting boiler and machinery limits. These coverages may be subject to separate limits of liability or be part of a blanket limit. In either case, the appropriate limits of liability for business interruption and extra expense under a boiler and machinery policy are determined in essentially the same manner as business interruption and extra expense limits under a property insurance policy. Business interruption work sheets are used to arrive at the proper business interruption limit. Just remember that boiler and machinery policies *exclude* ordinary payroll unless the insured elects to buy that coverage back. Boiler and machinery extra expense coverage pays for such items as rental of replacement equipment or facilities; therefore, selecting a boiler and machinery extra expense limit involves projecting these types of expenses which would be incurred in the event of a worst case loss. Remember that some coverage (at least \$5,000) for expenses to expedite repairs or receipt of permanent replacement equipment is provided as part of the direct damage coverage.

ORIG. PRINTING  
JUNE 1993

COMMERCIAL PROPERTY  
BOILER & MACHINERY

Sections Reserved

## BUSINESS INTERRUPTION BOILER AND MACHINERY COVERAGE

In the event of the explosion of a boiler or the breakdown of equipment, a business with basic direct damage boiler and machinery coverage (discussed beginning on page XI.G.1) will have coverage for the cost to repair or replace the damaged equipment and any other property damaged by the accident. But if that business is unable to continue its normal operations while the damaged equipment and other property is being repaired or replaced, it could suffer an income loss that might well rival or even exceed the direct damage loss. Even if the business is able to continue operations on a makeshift basis while repairs are going on, its income could be offset by the extra costs of makeshift operations.

Income and expense losses like the ones just described are often referred to as time element losses, because the magnitude of the loss depends on how long it takes to repair or replace the damaged property. Coverage for income or expense loss resulting from a covered accident to covered equipment usually must be added to a boiler and machinery policy by endorsement, although there are a few insurer forms that include time element coverage provisions in the same form that provides the direct damage coverage.

Businesses whose operations depend on specialized equipment would in most cases be unable to continue operations on a makeshift basis in the event of severe damage to the equipment. These businesses would probably have to shut down until the equipment was repaired or replaced. Boiler and machinery business interruption coverage pays for income loss associated with an interruption of operations that results from a covered accident to covered equipment. Extra expenses incurred to reduce or avoid the interruption of operations are also covered, but only to the extent that the amount otherwise payable is reduced.

This discussion examines the key provisions of traditional business interruption boiler and machinery coverage endorsements. It is based on a study of the coverage forms and endorsements used by the major boiler and machinery insurers, including but not limited to the Insurance Services Office, Inc. (ISO), boiler and machinery forms. Significant differences between the 1995 and 1991 ISO business interruption forms are addressed throughout the discussion, since both editions are in widespread use. The discussion also comments on differences between boiler and machinery and commercial property business interruption coverage provisions.

There are two other basic types of boiler and machinery time element coverage: extra expense coverage and combined business interruption and extra expense coverage. Extra expense coverage is discussed beginning on page XI.I.1. Combined business interruption and extra expense coverage is discussed beginning on page XI.J.1.

## Valued vs. Actual Loss Sustained Coverage

There are two basic types of boiler and machinery business interruption coverage endorsements.

- Valued endorsements
- Actual loss (or actual loss sustained) endorsements

Valued business interruption coverage endorsements provide for payment to the insured of a predetermined sum for each day of interrupted operations, regardless of the dollar loss actually suffered by the insured during the interruption. Actual loss business interruption coverage endorsements, on the other hand, provide for payment of the amount of loss actually suffered by the insured, as defined in the endorsement. Another key difference between the two types of endorsements is that valued business interruption endorsements do not contain a coinsurance clause, whereas actual loss endorsements do.

Actual loss sustained coverage is much more prevalent than valued coverage. As a general rule, boiler and machinery insurers (like commercial property insurers) prefer to sell actual loss sustained business interruption coverage, because under a valued form it is possible for an insured to collect more than the amount actually lost. Nevertheless, valued boiler and machinery business interruption coverage is much more widely available than its commercial property insurance counterpart.

Despite the important differences that separate them, actual loss sustained and valued boiler and machinery business interruption coverage forms have many features in common. Therefore, what follows is not two separate discussions, but one discussion that makes note of differences between the two types of forms as needed on a provision-by-provision basis.

## Coverage Trigger

For coverage to apply, the business interruption must be the result of a covered accident occurring during the policy term to covered equipment. Furthermore, the business interruption must be the result of direct physical damage to covered property. If no covered property is damaged, no business interruption coverage applies.

Most forms require that the object suffering the accident must be of a type and at a location specified as covered in the business interruption schedule, and that the object be in use or connected ready for use. However, there are a few insurer forms that do not have an in use/connected ready for use requirement.

Most forms stipulate that the business interruption be caused solely by an accident to an object. Strictly read, this requirement would seem to eliminate all coverage for business interruption caused jointly by a boiler and machinery accident and any other event. Surely this is not

the intent, since there are undoubtedly instances when, say, a boiler explosion would give rise to a fire and the resulting business interruption could be said to be caused by both the fire and the boiler and machinery accident. It would be preferable for this provision to stipulate that the policy covers only the portion of the interruption caused by the accident, or covers only to the extent that the interruption is caused by the accident.

## Coverage Grant

Under an actual loss sustained endorsement, the insurer agrees to pay for the insured's "actual loss," which is defined essentially as net profits plus fixed charges and expenses, *excluding* ordinary payroll expense, to the extent that they would have been earned by the business had there been no accident. The exact language is shown in Exhibit XI.H.1.

Under a valued business interruption endorsement, the insurer agrees to pay the daily value amount shown in the declarations or the endorsement schedule for each day of totally interrupted operations, and to pay a portion of the daily value amount for each day during which the insured's operations are partially interrupted. The language is shown in Exhibit XI.H.1. The loss payment condition found much later in the form establishes that payment of the daily value amount is subject to the per accident business interruption limit of loss shown in the declarations.

## Expenses To Reduce Loss

Both actual loss sustained and valued business interruption forms provide coverage for extra expense incurred to reduce the business interruption loss. However, in both forms the extra expense coverage is limited to the amount by which the extra expenses incurred actually do reduce the amount otherwise payable to the insured.

## Ordinary Payroll Coverage

Because the definition of "actual loss" excludes ordinary payroll, actual loss sustained business interruption endorsements do not cover ordinary payroll unless ordinary payroll coverage is indicated in the declarations or the schedule that is part of the business interruption coverage endorsement. An option to include ordinary payroll expense is written into the coverage grant portion of the endorsement. This is exactly the opposite of commercial property business interruption forms, which provide coverage for ordinary payroll unless it is specifically excluded by endorsement.

Valued business interruption forms make no mention of ordinary payroll. Since the insured recovers a predetermined amount for each day of interruption, provisions establishing what costs are recoverable are unnecessary.



## **EXHIBIT XI.H.1**

### **BOILER AND MACHINERY BUSINESS INTERRUPTION COVERAGE GRANT**

#### **Actual Loss Sustained Coverage:**

**We will pay:**

- a. your actual loss from a total or partial interruption of business; and
- b. the reasonable extra expense incurred by you or us to reduce or avert interruption of business. The amount we pay for extra expense is limited to the extent that our payment under paragraph a. is reduced.

**... Actual loss means the sum of:**

- a. The net profits you fail to earn because of business interruption resulting from an accident; and
- b. whatever part of the following fixed charges and expenses the business failed to earn but would have earned if there had been no accident:
  - (1) salaries and wages of officers, executives, employees under contract and other essential employees, as well as pensions and directors' fees but not your ordinary payroll expense; and
  - (2) manufacturing, selling, administrative expenses and any other items contributing to your overhead expenses.

Source: Insurance Services Office, Inc., Form BM 15 26 06 95, Copyright 1994

#### **Valued Coverage:**

**We will pay:**

- a. the daily limit shown in the business interruption schedule for each day during which your business is totally interrupted; or
- b. a part of the daily limit shown in the business interruption schedule for each day during a partial interruption of business at the locations specified in the schedule. We will divide the partial interruption by the average daily business. The resulting factor will then be multiplied by the daily limit to determine how much we will pay.
- c. The reasonable extra expense incurred by you or us to reduce or prevent the interruption of business. The amount we pay for extra expense is limited to the extent that any payment under paragraphs a. and b. is reduced.

Source: Insurance Services Office, Inc., Form BM 15 25 06 95, Copyright 1994

## Indemnity Period

The indemnity period is the time during which the income or expense loss must occur for coverage to apply. Traditionally, the indemnity period in boiler and machinery business interruption coverage forms has been the time between the date of the direct damage loss and the date when repair or replacement of damaged property is complete. The 1991 and prior ISO boiler and machinery business interruption endorsements are typical in this respect.

However, some businesses might continue to suffer income loss even after the completion of repairs. In some cases, the insured's customers may not be aware that the insured is back in business, or they have made alternate contractual arrangements that must run their course.

The 1995 edition ISO business interruption endorsements (but not the prior editions) provide coverage for 5 consecutive days after the date when repairs are complete. Some insurer forms include an extended period of indemnity provision that grants coverage for 30 days after completion of repairs, or for the number of days specified in the declarations. Regardless of the length of the indemnity period established in the form, it can virtually always be increased for a specified number of days, using an extended period of indemnity endorsement. In the ISO boiler and machinery forms portfolio, the appropriate endorsement is BM 15 38, extended period of restoration.

Nearly all forms exclude from coverage any additional time needed for repairs or replacement as a result of the enforcement of any ordinance or law. Interestingly, there is no preprinted endorsement to add back coverage for increased time to repair, replace, or rebuild as a result of ordinance enforcement in the ISO boiler and machinery forms portfolio—although there is such an endorsement in the ISO commercial property forms portfolio (CP 15 31, ordinance or law—increased period of restoration). Probably the reason for this difference is that relatively few boiler and machinery policy losses cause damage to the building housing the covered equipment. However, some insureds do have an ordinance enforcement time element exposure. For example, a steam boiler explosion could certainly damage the insured's building badly enough to trigger a local building ordinance and extend the time needed to restore operations. There are less obvious exposures as well, particularly those associated with electrical wiring that is often part of the building. Fortunately, time element coverage in connection with direct damage demolition/increased cost of construction coverage is available from most boiler and machinery insurers, despite the lack of an ISO endorsement.

## Exceptions to Direct Damage Exclusions

When business interruption coverage is provided by endorsing the coverage provided in the direct damage coverage form, all of the provisions of that form apply to the coverage provided by the business interruption endorsement. However, most boiler and machinery business interruption endorsements stipulate that the following exclusions in the basic form do not apply to the coverage provided by the endorsement.

- A delay in, or interruption of, any business, manufacturing, or process activity
- Lack of power, light, heat, steam, or refrigeration

An exclusion of coverage for delay or interruption of business is clearly incompatible with an endorsement providing business interruption coverage. Exempting time element coverage from this exclusion merely eliminates the obvious inconsistency between the basic direct damage coverage form and business interruption coverage endorsements.

The 1991 and prior editions of the ISO boiler and machinery business interruption endorsements also stipulate that the exclusion of "any other indirect result of an accident to an object" does not apply to time element coverage. However, this exemption was omitted in the 1995 edition, since the business interruption coverage endorsements provide coverage only for specified types of indirect loss.

## Spoilage Business Interruption Coverage

A covered accident could well damage power generating equipment owned by the insured and located on the insured's premises. Exempting the coverage provided by a business interruption endorsement from the lack of power exclusion has the effect of providing coverage for income loss that results from the insured's inability to generate power with its own damaged equipment.

Exempting business interruption coverage from the exclusion of coverage for lack of power, light, heat, steam, or refrigeration has another important consequence that may not be immediately obvious. It has the effect of granting business interruption coverage in connection with spoilage loss. In other words, even if the direct damage form is not endorsed to cover spoilage from a covered accident, boiler and machinery business interruption endorsements *do* provide coverage for income loss resulting from spoilage of perishable goods caused by a covered accident.

## Utility Interruption Endorsement

However, utility service interruption coverage must be added by endorsement. Even though the lack of power exclusion does not apply to business interruption coverage, objects owned by a utility and located away from the insured's premises shown in the policy schedule do not qualify as covered objects. For this reason, there is no coverage for business interruption loss resulting from utility service interruption originating off premises unless the policy has been endorsed to provide utility interruption coverage. Most insurers use a single endorsement to provide both direct damage and time element coverage; the ISO endorsement is BM 15 35, utility interruption.

## Additional Exclusions

Boiler and machinery business interruption endorsements generally impose three additional exclusions not found in the basic form.

- Interruption of business that would not have been carried on even if the accident had not occurred

- Failure of the insured to resume business at covered locations with due diligence and dispatch
- Suspension, lapse, or cancellation of a contract

## Idle Periods

There is no coverage for business interruption that would have occurred even if there had been no covered accident to covered equipment. For example, suppose that a given manufacturer has a scheduled plant closing during the last 2 weeks of July every year. If a boiler and machinery accident were to cause a shutdown for the entire month of July, the insured manufacturer would collect only for loss occurring during the part of the month when the plant was scheduled to be operational. Another example of the operation of this exclusion has to do with utility interruption. Suppose that a covered accident at the premises of the insured were to take place at a time when the electric utility supplying power to the insured's area was unable to do so because of an equipment breakdown at its premises. Unless the insured has purchased utility interruption coverage by endorsement, the insurer might—with some justification—maintain that there is no coverage for business interruption during the period of time when the electric utility is unable to supply power to the area. Even if there had been no accident at the insured's premises, the insured's operations would have been interrupted by the inability of the electric utility to supply power to the area.

Even in the absence of this exclusion the insured would probably not be able to collect under an actual loss sustained form for periods when operations would have been suspended regardless of whether an accident had occurred. The language of an actual loss sustained form stipulates that the actual experience of the business before the accident and the probable experience after the accident will be taken into account in determining the insured's "actual loss."

## Resumption of Operations

The exclusion of coverage for loss or expense resulting from the insured's failure to get back in business as soon as possible ties in with requirements elsewhere in the form (under the heading "Reducing Your Loss") that the insured resume normal operations as soon as possible, and use every means available to minimize the loss. Strictly read, these provisions might seem to void time element coverage if the insured does not act expeditiously to resume operations, and to preclude the possibility of any loss recovery for business interruption loss in the event the insured business decides not to reopen at all.

However, it is interesting and probably very significant that the language of the resumption of operations provisions in current ISO commercial property time element forms makes it clear that the insured is not required to resume operations expeditiously, or even at all, to collect for a business interruption loss. The commercial property language makes it very clear that the resumption of operations provisions act only to limit loss recovery to the amount that would

have been earned during the time it would have taken for the insured to resume operations with due diligence and dispatch. The language in current ISO boiler and machinery time element forms is much like the language in pre-1991 ISO commercial property time element forms, and there is no logical reason for such provisions to apply differently to boiler and machinery coverage than to commercial property coverage. Therefore, it seems reasonable to assume that the intent of the resumption of operations and reduction of loss provisions in boiler and machinery forms is the same as in commercial property forms despite the differences in language used.

## Loss of Contract

A lengthy—or even just ill-timed—shutdown of operations could cause a business to lose not only orders for goods and services that would have been produced during the time needed for repairs, but perhaps even an entire contract to supply goods or services for months or years after completion of repairs. The loss of contract exclusion, also found in commercial property time element forms, stipulates that there is no coverage for loss or expense resulting from the suspension, lapse, or cancellation of a contract beyond the time when business could be resumed. This provision reinforces the indemnity period provision found in most boiler and machinery time element forms, which allows for recovery only of loss suffered during the period of time between the accident date and the date when damaged property has been repaired or replaced (and, in some forms, during a specified number of days after the completion of repairs).

## Coinsurance and Annual Reports

Most actual loss sustained boiler and machinery business interruption forms *require* the insured to submit “annual reports” on “approved report forms” furnished by the insurer. An ISO business interruption report of values form (BM 15 31) or an insurer version of that form serves as the approved report form. The only difference between a commercial property business interruption work sheet and a boiler and machinery business interruption report of values is that the boiler and machinery form has an entry for ordinary payroll expense under deductions.

Virtually all actual loss sustained boiler and machinery business interruption endorsements contain what amounts to a 100 percent coinsurance clause. If the actual total of net profits plus fixed charges and expenses as determined at the time of the accident is greater than the estimated total of the same items shown on the required annual report of business interruption values, the insured can collect only a percentage of the loss: the ratio of the actual total to the estimated total. Exhibit XI.H.2 illustrates the operation of the coinsurance clause.

## EXHIBIT XI.H.2

### OPERATION OF 100 PERCENT COINSURANCE CLAUSE

100 Percent Coinsurance Formula:

$$[\text{Amount of Loss} \times (\text{Estimated annual business interruption value} \div \text{Actual annual business interruption value})] - \text{Deductible} = \text{Loss recovery}$$

Example:

Estimated annual business interruption value (as shown on required annual report)	\$400,000
Actual annual business interruption value (for 12-month period following loss date)	\$500,000
Business interruption loss amount	\$200,000
Deductible	\$ 5,000

Loss recovery:

$$[\$200,000 \times (\$400,000 \div \$500,000) - \$5,000] = \$155,000$$

\$200,000	Loss amount
x .80	Ratio of estimated to actual annual business interruption value
\$160,000	Loss recovery before deductible
- \$ 5,000	Deductible
\$155,000	Amount paid

Fortunately, the coinsurance clause in actual loss sustained boiler and machinery business interruption forms can be suspended by endorsement. The ISO endorsement is BM 15 32, conditional suspension of coinsurance. It suspends the coinsurance provision as long as the insured submits business interruption reports of values as required.

In the 1995 edition of the ISO actual loss sustained business interruption endorsement, the coinsurance clause applies only if the insurer does not receive the insured's annual report of values within 3 months of the due date. With this approach, there is no need for a separate endorsement suspending the coinsurance clause.

Commercial property business interruption forms differ somewhat from boiler and machinery forms with respect to reports of value and coinsurance. Although nearly all commercial property business interruption forms include a coinsurance provision, the applicable percentage is

usually only 50 to 80 percent of the annual business interruption value, rather than 100 percent. Another difference is that most commercial property business interruption forms apply the coinsurance clause to the 12-month period beginning with policy inception, rather than to the 12-month period beginning with the date of direct damage. Also, commercial property business interruption forms usually do not require the insured to submit business interruption work sheets. As a practical matter, however, most property insurers insist on them as a condition of suspending the operation of the coinsurance clause, which is accomplished either by activation of an "agreed value" option that is written into the form or by attachment of an "agreed amount" endorsement.

## No Coinsurance in Valued Forms

Valued boiler and machinery business interruption endorsements do not contain a coinsurance provision. In the event of covered business interruption, the insured is entitled to receive the daily value amount shown in the declarations or endorsement schedule for each day of totally interrupted operations, and a portion of the daily value amount for each day of partially interrupted operations. There is no possibility of a coinsurance penalty—although it is entirely possible for the amount selected as the daily value to be inadequate in comparison to the amount actually lost by the insured business.

## Premium Adjustment

Actual loss sustained boiler and machinery business interruption endorsements provide for annual adjustment of premium based on the required reports of business interruption values. The insured may have to pay an additional premium at year-end, if business results turn out better than projected. On the other hand, if business results fall short of what was projected, the insured will receive a return premium. The most that the insurer will return is 75 percent of the original premium charged. Valued business interruption endorsements normally do not provide for premium adjustment.

Commercial property business interruption forms do not typically contain a premium adjustment provision, but it can be added by endorsement. The ISO endorsement is CP 15 20, business income premium adjustment.

## Notice of Accident, Commencement of Liability

Under both valued and actual loss sustained forms, the insured is required to notify the insurer immediately, and to follow up with written confirmation of the notice. Coverage for business interruption resulting from a covered accident begins at the time of the accident, or 24 hours *before* the insurer receives notice of the accident—whichever is *later*. In other words, late reporting of an accident affects when time element coverage begins. Consequently, this provision must be taken very seriously. There is no commercial property insurance corollary for this provision.

## Business Interruption Limit

Valued business interruption endorsements establish two limits: a daily limit, which is the amount the insured is entitled to collect for each day of fully suspended operations; and a limit of loss, which applies per accident. Actual loss sustained business interruption endorsements establish a single limit of loss, which applies per accident. Both types of forms specify that the business interruption limit is not a sublimit, but instead a separate additional limit.

In establishing the limit of insurance, keep in mind that the annual business interruption value as revealed by the work sheet may not always be an adequate limit. If a covered accident could shut down the insured's operations for more than 12 months (perhaps because of long lead time involved in replacing custom equipment, the limit of insurance should be based on the appropriate multiple (e.g., 125 percent if the shutdown would last for 16 months) of the annual business interruption value shown on the work sheet.

## Loss Recovery

In actual loss sustained forms, the business interruption limit is not necessarily the amount that the insured will receive in the event of loss. It is merely the maximum that the insurer will pay. In the event of loss the insured will receive the "actual loss" as defined in the policy, taking into account the "actual experience of your business before the accident and the probable experience you would have had without the accident." Exhibit XI.H.3 shows the definition of actual loss in the ISO actual loss sustained business interruption endorsement.

In valued forms, however, the insured does receive the daily limit amount shown in the declarations or the schedule on the front page of the business interruption endorsement for each day during which operations are totally interrupted, subject to the business interruption limit of loss shown, which applies per accident. For each day during which the insured's operations are only partially interrupted, the insured recovers a proportionate share of the daily limit, subject to the per accident business interruption limit of loss shown.

The vast majority of commercial property business interruption coverage is written on an actual loss sustained basis, with essentially the same method of determining loss recovery as under a boiler and machinery actual loss sustained business interruption endorsement. Commercial property valued business interruption coverage is *very* rare.

## Expenses To Reduce Loss

Both actual loss sustained and valued business interruption forms provide coverage for extra expense incurred to reduce the business interruption loss. However, in both forms loss recovery for extra expenses is limited to the amount by which the extra expenses incurred actually do reduce the amount otherwise payable to the insured. Businesses that might spend more to stay in business than they would have earned if no accident had occurred should consider an



extra expense coverage form (discussed beginning on page XI.I.1) or a combination business interruption and extra expense coverage form (discussed beginning on page XI.J.1).

## EXHIBIT XI.H.3 ACTUAL LOSS DEFINITION

We will pay your actual loss from a total or partial interruption of business...

Actual loss means the sum of:

- a. the net profits you fail to earn because of business interruption resulting from an accident; and
- b. whatever part of the following fixed charges and expenses the business failed to earn but would have earned if there had been no accident:
  - (1) salaries and wages of officers, executives, employees under contract and other essential employees, as well as pensions and directors' fees but not your ordinary payroll expense; and
  - (2) manufacturing, selling, administrative expenses, and any other items contributing to your overhead expenses.

Source: Insurance Services Office, Inc., Form BM 15 26 06 95, Copyright 1994

## Deductible Options

Boiler and machinery business interruption coverage is nearly always subject to a separate deductible that applies in addition to the direct damage deductible. Valued boiler and machinery business interruption endorsements normally have two deductible options.

- Time deductible
- Dollar deductible

When a time deductible applies, the insurer pays only for loss occurring after the specified number of hours or days immediately following the "commencement of liability." (Remember, the commencement of liability is at the time of the accident, or 24 hours *before* the insurer receives notice of the accident, whichever is later.) When a dollar deductible applies, the insurer pays only the portion of the loss that exceeds the indicated dollar amount.

Actual loss sustained boiler and machinery business interruption endorsements normally include a third deductible option as well: a multiple of daily value deductible. When a multiple of daily value deductible applies, the insurer pays only the portion of the loss that exceeds the

dollar equivalent of the specified multiple of the daily business interruption value during the period of interruption. Suppose, for example, that the specified multiple is 3, and that it is determined at the end of the period of interruption that the daily business interruption value for that interruption was \$10,000. The multiple of daily value deductible for that particular business interruption loss would be \$30,000. Because that insured's daily business interruption value might be different for a different period of interruption, the multiple of daily value deductible for the same insured under the same policy might be a different amount for a different accident.

## ISO Gross Earnings Business Interruption Endorsement

In addition to actual loss sustained and valued business interruption endorsements, the ISO boiler and machinery forms portfolio includes a third business interruption endorsement: a gross earnings business interruption endorsement (BM 15 36). The ISO gross earnings business interruption endorsement is an actual loss sustained form that uses gross earnings terminology in the coverage grant. Where the actual loss sustained form promises to pay the insured's "actual loss," the gross earnings form promises to pay the insured's "reduction in gross earnings ... less expenses that do not continue." Exhibit XI.H.4 compares the definitions of actual loss and gross earnings. The differences in language between the actual loss sustained endorsement and the gross earnings endorsement do not appear to result in any substantive differences in loss recovery.

It may be that the boiler and machinery gross earnings endorsement is included in the ISO portfolio simply because the commercial property business interruption coverage is often written on a gross earnings form with a very similar (but not identical) coverage grant and gross earnings definition. Note, however, that the current *ISO* commercial property business interruption endorsements use the term "business income" instead of "gross earnings" (although many *insurer* commercial property business interruption endorsements continue to use the "gross earnings" terminology that was previously used in ISO commercial property forms). Some insurers have elected to use the "business income" terminology found in current ISO commercial property forms in their boiler and machinery forms, even though ISO has not.

## **EXHIBIT XI.H.4**

### **GROSS EARNINGS AND ACTUAL LOSS LANGUAGE COMPARED**

We will pay your actual loss from a total or partial interruption of business ...

Actual loss means the sum of:

- a. The net profits you fail to earn because of business interruption resulting from an accident; and
- b. whatever part of the following fixed charges and expenses the business failed to earn but would have earned if there had been no accident:
  - (1) salaries and wages of officers, executives, employees under contract and other essential employees, as well as pensions and directors' fees but not your ordinary payroll expense; and
  - (2) manufacturing, selling, administrative expenses and any other items contributing to your overhead expenses.

Source: Insurance Services Office, Inc., Form BM 15 26 06 95, Copyright 1994

We will pay the amount of your reduction in gross earnings from the total or partial interruption of business, less expenses that do not continue during the period of interruption ...

Gross earnings means the sum of:

- a. total net sales; and
- b. other earnings from your business operations;

less the cost of:

- c. raw stock used to make finished stock
- d. materials and supplies used in your business operations;
- e. merchandise sold including packaging materials;
- f. services you buy from outsiders, who are not in your employ, that do not continue under contract; and
- g. your entire ordinary payroll expense, except officers, executives, department managers, employees under contract and other important employees.

Source: Insurance Services Office, Inc., Form BM 15 26 06 95, Copyright 1994

## BOILER AND MACHINERY EXTRA EXPENSE COVERAGE

In the event of the explosion of a boiler or the breakdown of equipment, a business with basic direct damage boiler and machinery insurance (discussed beginning on page XI.G.1) will have coverage for the cost to repair or replace the damaged equipment and any other property damaged by the accident. But if that business is unable to continue its normal operations while the damaged equipment and other property is being repaired or replaced, it could suffer an income loss that might well rival or even exceed the direct damage loss. Even if the business is able to continue operations on a makeshift basis while repairs are in progress, its income could be offset by the extra costs of makeshift operations.

Income and expense losses like the ones just described are often referred to as time element losses, because the magnitude of the loss depends on how long it takes to repair or replace the damaged property. Coverage for income or extra expense loss resulting from a covered accident to covered equipment usually must be added to a boiler and machinery policy by endorsement, although there are a few insurer forms that include time element coverage provisions in the same form that provides the direct damage coverage.

Extra expense coverage is appropriate for any business that would be willing and able to continue operations, despite a covered accident, by incurring additional expenses—expenses that might even exceed the amount that the business would have earned during the period of interruption. The most frequently cited examples of businesses in this category are newspapers and dairies, whose customers would perhaps be permanently lost to competitors if continuous service were not provided. However, any organization for whom market share or customer service considerations are paramount (a hospital, for example) could fall into this category, if it would have some means of continuing operations despite a covered accident.

Extra expense coverage pays for costs in excess of normal operating expenses that are incurred by a business to continue operations without interruption, or to minimize the interruption, after an accident to covered equipment. Note, however, that income loss is not covered at all under an extra expense endorsement.

This discussion examines the key provisions of traditional extra expense boiler and machinery coverage endorsements. It is based on a study of the coverage forms and endorsements used by the major boiler and machinery insurers, including but not limited to the Insurance Services Office, Inc. (ISO), boiler and machinery forms. Significant differences between the 1995 and 1991 ISO extra expense forms are pointed out, since both editions are in widespread use.

There are two other basic types of boiler and machinery time element coverage: business interruption coverage and combined business interruption and extra expense coverage. Business interruption coverage is discussed beginning on page XI.H.1. Combined business interruption and extra expense coverage is discussed beginning on page XI.J.1.

## Coverage Trigger

For coverage to apply, the extra expense must be the result of a covered accident occurring during the policy term to covered equipment. Furthermore, the extra expense must be the result of direct physical damage to covered property. If no covered property is damaged, no extra expense coverage applies.

Most forms require that the object suffering the accident must be of a type and at a location specified as covered in the extra expense schedule, and that the object be in use or connected ready for use. However, there are a few insurer forms that do not have an in use/connect-ed ready for use requirement.

### EXHIBIT XI.I.1

#### BOILER AND MACHINERY EXTRA EXPENSE DEFINITION

Extra expense:

- a. means the cost of operating your business during the period of restoration minus what the cost of operating it would have been had no accident occurred. Included in extra expense are necessary emergency services, merchandise, or other property of other concerns.
- b. may also include all or part of the cost of repairing or replacing property damaged or destroyed by an accident. To qualify as extra expense, that cost must be insured for the purpose of minimizing the total of our extra expense. The amount that we would include in our extra expense payment would be equal to:
  - (1) the savings in extra expense you have enabled us to realize by having the repairs or replacements made; or
  - (2) the amount of extra expense you paid to have the repairs or replacements made;whichever is less.
- c. does not mean:
  - (1) loss of income; or
  - (2) expense in excess of what is necessary to keep your business operating as nearly "normal" as practicable.

Source: Insurance Services Office, Inc., Form BM 15 27 06 95, Copyright 1994

Most forms stipulate that the extra expense be caused solely by an accident to an object. Strictly read, this requirement would seem to eliminate all coverage for extra expense caused jointly by a boiler and machinery accident and any other event. Surely this is not the intent, since there are undoubtedly instances when, say, a boiler explosion would give rise to a fire and the resulting extra expense could be said to be caused by both the fire and the boiler and machinery accident. It would be preferable for this provision to stipulate that the policy covers only the portion of the expenses incurred because of the accident, or covers only to the extent that the expenses are caused by the accident.

## Coverage Grant

The insurer agrees to pay the "extra expense you necessarily incur to operate your business as nearly normal as practicable during the restoration period following an accident." Extra expense is defined essentially as the cost of operations during the period between the accident date and the completion of repairs, minus what the cost of operations would have been during that period if there had been no accident. The exact language of the extra expense definition in the ISO extra expense coverage endorsement is shown in Exhibit XII.1.

## Indemnity Period

The indemnity period in boiler and machinery extra expense coverage forms is the time required to repair or replace the damaged property. Coverage applies only to extra expenses incurred during this period of time, which is referred to in many forms as the period of restoration.

In the 1995 edition of the ISO combined business interruption and extra expense coverage endorsement (BM 15 29), the indemnity period applicable to both coverages extends for 5 consecutive days *after* the date when repairs are complete. However, no change was made to the indemnity period in the 1995 edition of the extra expense coverage endorsement; coverage ends with the completion of repairs, just as in prior editions.

In most forms, there is no coverage for loss suffered during any additional time needed for repairs or replacement as a result of the enforcement of any ordinance or law. Interestingly, there is no preprinted endorsement to add back coverage for increased time to repair, replace, or rebuild as a result of ordinance enforcement in the ISO boiler and machinery forms portfolio—although there *is* such an endorsement in the ISO commercial property forms portfolio (CP 15 31, ordinance or law—increased period of restoration). Probably the reason for this difference is that relatively few boiler and machinery policy losses cause damage to the building housing the covered equipment. However, some insureds do have an ordinance enforcement time element exposure. For example, a steam boiler explosion could certainly damage the insured's building badly enough to trigger a local building ordinance and extend the time needed to restore operations. There are less obvious exposures as well, particularly those associated with electrical wiring that is often part of the building. Fortunately, time element coverage in connection with direct damage demolition/increased cost of construction coverage is available from most boiler and machinery insurers, despite the lack of an ISO endorsement.

## Exceptions to Direct Damage Exclusions

When extra expense coverage is provided by endorsing the direct damage coverage form, all of the provisions of that form apply to the coverage provided by the extra expense endorsement. However, most extra expense endorsements stipulate that the exclusion of loss due to lack of power, light, heat, steam, or refrigeration does not apply to the extra expense coverage provided.

The 1991 and prior editions of the ISO boiler and machinery extra expense endorsement also stipulate that the exclusion of "any other indirect result of an accident to an object" does not apply to the extra expense coverage. However, this exemption was omitted in the 1995 edition. The reason for the change is that the extra expense coverage endorsement provides coverage only for specified types of indirect losses; not all indirect losses that may result from a covered accident are covered.

Another exception to a direct damage exclusion that appears in the 1991 and prior editions of the ISO boiler and machinery extra expense endorsement but not in the 1995 edition applies to loss due to a delay in or interruption of any business, manufacturing, or processing activity. The reason for omitting this exception in the 1995 edition of the extra expense endorsement is to avoid conveying the impression that the extra expense coverage endorsement provides business interruption coverage.

## Spoilage Extra Expense Coverage

A covered accident could well damage power generating equipment owned by the insured and located on the insured's premises. Exempting the coverage provided by an extra expense endorsement from the lack of power exclusion has the effect of providing coverage for extra expenses that result from the insured's inability to generate power with its own damaged equipment.

Exempting extra expense coverage from the exclusion of coverage for lack of power, light, heat, steam, or refrigeration has another important consequence that may not be immediately obvious. It has the effect of granting extra expense coverage in connection with spoilage loss. In other words, even if the direct damage form is not endorsed to cover spoilage from a covered accident, boiler and machinery extra expense endorsements usually *do* provide coverage for any time element loss resulting from spoilage of perishable goods caused by a covered accident.

## Utility Interruption Endorsement

However, utility service interruption coverage must be added by endorsement. Even though the lack of power exclusion does not apply to extra expense coverage, objects owned by a utility and located away from the insured's premises shown in the policy schedule do not qualify as covered objects. For this reason, there is no coverage for loss (including but not limited to spoilage) resulting from utility service interruption originating off premises unless the policy

has been endorsed to provide utility interruption coverage. Most insurers use a single endorsement to provide both direct damage and time element coverage; the ISO endorsement is BM 15 35, utility interruption.

## Additional Exclusions

Boiler and machinery extra expense endorsements impose three additional exclusions not found in the basic form.

- Extra expense due to interruption of business that would not have been carried on even if the accident had not occurred
- Extra expense due to failure of the insured to use all reasonable means to resume normal operations at covered locations as soon as possible
- Extra expense due to suspension, lapse, or cancellation of a contract

## Idle Periods

There is no coverage for extra expense to carry on business operations that would not have gone on even if there had been no covered accident to covered equipment. For example, suppose that a manufacturer schedules plant closing during the last 2 weeks of July every year. If a boiler and machinery accident were to force makeshift operations for the entire month of July, the insured manufacturer would collect only for extra expense incurred in connection with the part of the month when the plant was scheduled to be operational. Another example of the operation of this exclusion has to do with utility interruption. Suppose that a covered accident at the premises of the insured were to take place at a time when the electric utility supplying power to the insured's area was unable to do so because of an equipment breakdown at its premises. Unless the insured has purchased utility interruption coverage by endorsement, the insurer might—with some justification—maintain that there is no coverage for business interruption during the period of time when the electric utility is unable to supply power to the area. Even if there had been no accident at the insured's premises, the insured's operations would have been interrupted by the inability of the electric utility to supply power to the area.

Although there is no direct corollary for this exclusion in most commercial property extra expense forms, the insured would probably not be able to collect under a commercial property extra expense form either, for periods when operations would have been suspended regardless of whether an accident had occurred. The language of a commercial property extra expense form stipulates that the insured's recovery will be determined based on "all expenses that exceed the normal operating expenses *that would have been incurred by operations during the period of restoration* if no direct physical loss or damage had occurred." (Emphasis added.)



## Resumption of Normal Operations

Boiler and machinery extra expense forms contain an exclusion of coverage for expense resulting from the insured's failure to make every effort to resume normal operations as soon as possible. Strictly read, this exclusion might seem to void extra expense coverage altogether if the insured does not act expeditiously to resume normal operations. However, it is interesting and probably very significant that the language of the resumption of operations provisions in current ISO commercial property time element forms makes it clear that the resumption of operations provisions act only to limit loss recovery to the extra expense that would have been incurred if the insured had resumed operations with due diligence and dispatch.

The resumption of operations language in current ISO boiler and machinery time element forms is much like the language in pre-1991 ISO commercial property time element forms and there is no logical reason for such provisions to apply differently to boiler and machinery coverage than to commercial property coverage. Therefore, it seems reasonable to assume that the intent of the resumption of operations and reduction of loss provisions in boiler and machinery forms is the same as in commercial property forms despite the differences in language used.

## Loss of Contract

A lengthy—or even just ill-timed—period of makeshift operations could cause a business to lose not only orders for goods and services to be produced during the time when repairs are in progress, but perhaps even an entire contract to supply goods or services for months or years after completion of repairs. The loss of contract exclusion, also found in commercial property time element forms, stipulates that there is no coverage for loss or expense resulting from the suspension, lapse, or cancellation of a contract beyond the time when business could be resumed. This provision reinforces the indemnity period provision found in most boiler and machinery time element forms, which allows for recovery only of loss suffered during the period of time between the accident date and the date when damaged property has been repaired or replaced.

## Notice of Accident, Commencement of Liability

Extra expense endorsements contain a provision requiring the insured to notify the insurer immediately of an accident, and to follow up with written confirmation of the notice. Coverage for extra expenses resulting from a covered accident begins at the time of the accident, or 24 hours *before* the insurer receives notice of the accident—whichever is *later*. In other words, late reporting of an accident affects when coverage begins. Consequently, this provision must be taken very seriously. There is no commercial property insurance corollary for this provision.

## Monthly Limitation

Extra expense forms do not normally contain a coinsurance provision. Instead, they impose a monthly limitation on loss recovery. The monthly limitation is expressed as a percentage of the total extra expense limit. It places a maximum on the amount that can be collected, depending on the length of time required to repair or replace the damaged property. The monthly limitation percentages are indicated on the declarations page or the schedule on the front page of the extra expense endorsement.

A frequently selected monthly limitation is 40-80-100 percent. A 40-80-100 monthly limitation permits recovery of up to 40 percent of the extra expense limit when the period of restoration is 30 days or less, up to 80 percent of the limit when the period of restoration is 60 days or less, and up to 100 percent of the limit when the period of restoration is more than 60 days.

## Extra Expense Limits

The extra expense limit shown in the declarations or in the endorsement schedule is not a sublimit, but instead a separate additional limit. Like the direct damage limit, the extra expense limit applies per accident.

The monthly limitation must be taken into consideration when selecting limits of insurance. Basically, it is wise to make sure that the first month's recovery would be sufficient to cover a disproportionate share of the expenses in case the period of restoration is only 30 days or less. The heaviest expenses are likely to be incurred early on. Sometimes extra expense coverage can be purchased without a monthly limitation (or with a 100 percent limitation applying to the first 30 days, which is the same thing).

## Deductible Options

Boiler and machinery extra expense coverage is virtually always subject to a separate deductible that applies in addition to the direct damage deductible. This is not necessarily true of commercial property extra expense insurance; for example, none of the ISO time element forms impose a deductible on extra expense coverage, although many insurer forms do.

Most boiler and machinery extra expense coverage forms have a dollar amount type of deductible. (This is contrasted with boiler and machinery business interruption forms, which often contain options for two other types of deductibles as well: time deductibles, and multiple of daily value deductibles.) Under an extra expense form with a dollar deductible, the insurer pays only the portion of the loss that exceeds the indicated dollar amount.

## Limitations on Loss Recovery

Although not labeled as such, boiler and machinery extra expense forms, like their commercial property insurance counterparts, are actual loss sustained forms. They are not valued forms. That is to say that in the event of loss, the stipulated percentage of the extra expense limit is not necessarily the amount that the insured will receive in the event of loss. The extra expense limit is merely the maximum that the insurer will pay. In the event of loss the insured will recover not a predetermined sum, but only the expenses actually incurred (subject to the deductible, the monthly limitation, and the extra expense limit).

### Necessary Expenses

Remember, too, that in the coverage grant the insurer agrees to pay "the extra expense you *necessarily* incur ...." (Emphasis added.) This is echoed in the definition of extra expense, which includes the statement that "[e]xtra expense does not include expense in excess of what is necessary to keep your business operating as nearly normal as practicable." There may be some room for honest disagreement between the insurer and the insured about what expenses are necessary.

### Deduction for Salvage Value of Temporary Equipment

Most extra expense endorsements include a loss payment provision that allows the insurer to deduct from the loss payment amount the salvage value of any temporary or substitute equipment used during the period of restoration that is retained by the insured.

### Expediting Expense Limitation

Boiler and machinery direct damage forms nearly always provide at least a small amount of expediting expense coverage, regardless of whether a time element coverage endorsement is attached. Extra expense coverage endorsements clearly also cover expediting expenses although the language used is different. However, under an extra expense or combined business interruption and extra expense endorsement, loss recovery for expediting expenses is limited to the amount by which the expenses incurred actually do reduce the amount otherwise payable to the insured. In other words, expediting expenses are covered only to the extent that they reduce the extra expense loss amount that the insurer would otherwise have to pay. The portion of the extra expense definition that contains the expediting expense limitation is shown in Exhibit XI.I.2.

## **EXHIBIT XI.I.2**

### **EXPEDITING EXPENSE COVERAGE LIMITATION**

Extra expense ... may also include all or part of the cost of repairing or replacing property damaged or destroyed by an accident. To qualify as extra expense, that cost must be incurred for the purpose of minimizing the total of our extra expense. The amount that we would include in our extra expense payment would be equal to:

- (1) the savings in extra expense you have enabled us to realize by having the repairs or replacements made; or
- (2) the amount of extra expense you paid to have the repairs or replacements made;

whichever is less.

Source: Insurance Services Office, Inc., Form BM 15 27 06 95, Copyright 1994

## **BOILER AND MACHINERY COMBINED BUSINESS INTERRUPTION AND EXTRA EXPENSE COVERAGE**

In the event of the explosion of a boiler or the breakdown of equipment, a business with basic direct damage boiler and machinery insurance (discussed beginning on page XI.G.1) will have coverage for the cost to repair or replace the damaged equipment and any other property damaged by the accident. But if that business is unable to continue its normal operations while the damaged equipment and other property is being repaired or replaced, it could suffer an income loss that might well rival or even exceed the direct damage loss. Even if the business is able to continue operations on a makeshift basis while repairs are in progress, its income could be offset by the extra costs of makeshift operations.

Income and expense losses like the ones just described are often referred to as time element losses, because the magnitude of the loss depends on how long it takes to repair or replace the damaged property. Coverage for income or extra expense loss resulting from a covered accident to covered equipment usually must be added to a boiler and machinery policy by endorsement, although there are a few insurer forms that include time element coverage provisions in the same form that provides the direct damage coverage.

Boiler and machinery business interruption coverage pays for income loss associated with an interruption of operations that results from a covered accident to covered equipment. Coverage is also provided for extra expenses incurred to reduce or avoid the interruption of operations, but only to the extent that the amount otherwise payable is reduced.

Extra expense coverage pays for costs in excess of normal operating expenses that are incurred by a business to continue operations without interruption, or to minimize the interruption, after an accident to covered equipment. Income loss is not covered at all under an extra expense endorsement.

Some businesses need both business interruption and extra expense coverage. Many businesses that principally have business interruption exposures need extra expense coverage for their non-income-producing locations, like corporate office buildings and warehouses. Similarly, there are some businesses that have principally an extra expense exposure, but could suffer an income loss as well, if their property were damaged. A hospital, for example, would probably go to great lengths, regardless of cost, to secure and equip temporary quarters and continue to service the public. Nevertheless, it would probably lose some income, as a result of patients and physicians electing to have services performed elsewhere. And in some cases it is difficult to know in advance whether it will be necessary or even possible to resume operations while recovery is in progress. The solution to these coverage needs is the purchase of both business interruption and extra expense coverage. Combined business interruption and extra expense coverage endorsements provide both types of time element coverage in one form, subject to a single coverage limit.

This discussion examines the key provisions of traditional combination business interruption and extra expense boiler and machinery coverage endorsements. It is based on a study of the coverage forms and endorsements used by the major boiler and machinery insurers, including but not limited to the Insurance Services Office, Inc. (ISO), boiler and machinery forms. Significant differences between the 1995 and 1991 ISO combination forms are pointed out, since both editions are in widespread use.

There are two other basic types of boiler and machinery time element coverage: business interruption coverage and extra expense coverage. Business interruption coverage is discussed beginning on page XI.H.1. Extra expense coverage is discussed beginning on page XII.I.1.

## **Valued vs. Actual Loss Sustained Combination Coverage**

There are two basic types of boiler and machinery combination business interruption and extra expense coverage endorsements.

- Actual loss sustained combination endorsements
- Valued combination endorsements

Actual loss sustained combination endorsements are much more prevalent than valued combination endorsements. In fact, actual loss sustained combined business interruption and extra expense is the single most popular boiler and machinery time element coverage.

Valued combination endorsements seldom include the word "valued" in the title; for example, the ISO valued combination endorsement (BM 15 29) is simply called "combined business interruption and extra expense." The reason is that only the business interruption portion of the coverage is valued. The insured receives a predetermined sum for each month of fully interrupted operations, and a portion of that sum for each month of partially interrupted operations. However, recovery for extra expense is on an actual loss sustained basis—that is, the insured recovers not a predetermined sum, but the expenses in excess of normal expenses that are actually incurred. A single monthly limit (and a per accident limit of loss) applies to both business interruption and extra expense. There is no coinsurance clause.

Actual loss sustained combination endorsements, on the other hand, provide for payment, not of a predetermined amount, but of the amount of business interruption and extra expense loss actually suffered by the insured, as defined in the endorsement. The limit shown in the declarations or the endorsement schedule is merely the maximum that the insured can collect. A single per accident limit of loss applies to both business interruption and extra expense. Most actual loss sustained combination forms contain a 100 percent coinsurance clause that applies to both business interruption and extra expense loss recovery. However, compliance with the coinsurance clause is based on business interruption values only.

## Coverage Grant

Under an actual loss sustained combination endorsement, the insurer agrees to pay for the insured's "actual loss" from a total or partial interruption of business. The definition of actual loss in actual loss sustained combination forms is the same as in actual loss sustained business interruption forms: essentially, net profits plus fixed charges and expenses, *excluding* ordinary payroll expense, to the extent that they would have been earned by the business had there been no accident.

Under a valued combination endorsement, the insurer agrees to pay the monthly limit amount shown in the declarations or the endorsement schedule for each month of totally interrupted operations, and to pay a proportionate share of the monthly limit for each month during which the insured's operations are partially interrupted. Payment of the monthly limit amount is subject to the per accident limit of loss shown in the declarations.

Exhibit XI.J.1 compares the coverage grants of both types of combination forms.

### **EXHIBIT XI.J.1**

#### **COVERAGE GRANT IN COMBINED BUSINESS INTERRUPTION AND EXTRA EXPENSE ENDORSEMENTS**

Actual Loss Sustained Form:

We will pay:

- a. your actual loss from a total or partial interruption of business; and
- b. the extra expense you necessarily incur to operate your business as nearly normal as practicable during the period of restoration following an accident.

... Actual loss means the sum of:

- a. The net profits you fail to earn because of business interruption resulting from an accident; and
- b. whatever part of the following fixed charges and expenses the business failed to earn but would have earned if there had been no accident:
  - (1) salaries and wages of officers, executives, employees under contract and other essential employees, as well as pensions and directors' fees but not your ordinary payroll expense; and
  - (2) manufacturing, selling, administrative expenses and any other items contributing to your overhead expenses.

Source: Insurance Services Office, Inc., Form BM 15 33 06 95, Copyright 1994

*continued*

## EXHIBIT XI.J.1

### COVERAGE GRANT IN COMBINED BUSINESS INTERRUPTION AND EXTRA EXPENSE ENDORSEMENTS (cont.)

Valued Form:

We will pay you:

- a. the amount of monthly limit shown in the combined business interruption and extra expense schedule for each month your business is totally interrupted;
- b. a part of the monthly limit shown in the combined business interruption and extra expense schedule for each month during a partial interruption of business at the locations specified in the schedule. We will divide the partial interruption by the average daily business. The resulting factor will then be multiplied by the daily limit to determine how much we will pay.
- c. the extra expense you necessarily incur to operate your business in as nearly normal a manner as practicable during the period of restoration following an accident.

Source: Insurance Services Office, Inc., Form BM 15 29 06 95, Copyright 1994

## Extra Expense Coverage vs. Coverage for Expenses To Reduce Loss

Notice that the coverage grant in both the actual loss sustained and the valued combination endorsement includes the "extra expense you necessarily incur to operate your business as nearly normal as practicable during the restoration period following an accident."

In fact, the advantage of a combination business interruption and extra expense endorsement over a business interruption endorsement is the full extra expense coverage provided in the combination form. Both actual loss sustained and valued *business interruption* forms provide coverage for extra expense incurred to reduce the business interruption loss. However, in business interruption forms the extra expense coverage is limited to the amount by which the extra expenses incurred reduce the business interruption loss amount otherwise payable to the insured. The extra expense coverage of a combination endorsement is not subject to that limitation.

The definition of extra expense in both valued and actual loss combination endorsements is the same one found in extra expense endorsements: essentially, the cost of operations during the period between the accident date and the completion of repairs, minus what the cost of operations would have been during that period if there had been no accident.



## Ordinary Payroll Coverage

Because the definition of "actual loss" excludes ordinary payroll, actual loss sustained combination endorsements do not cover ordinary payroll unless ordinary payroll coverage is indicated in the declarations or the schedule that is part of the business interruption coverage endorsement. An option to include ordinary payroll expense is written into the coverage grant portion of the endorsement. This is exactly the opposite of commercial property business interruption forms, which provide coverage for ordinary payroll unless it is specifically excluded by endorsement.

Valued combination endorsements make no mention of ordinary payroll. Since the insured recovers a predetermined amount for each day of interruption, provisions establishing what costs recoverable are unnecessary.

## Notice of Accident, Commencement of Liability

Under both valued and actual loss sustained combination forms, the insured is required to notify the insurer of an accident immediately, and to follow up with written confirmation of the notice. Coverage for business interruption and extra expense resulting from a covered accident begins at the time of the accident, or 24 hours *before* the insurer receives notice of the accident—whichever is *later*. In other words, late reporting of an accident affects when time element coverage begins. Consequently, this provision must be taken very seriously. There is no commercial property insurance corollary for this provision.

## Indemnity Period

The indemnity period is the time during which the income or expense loss must occur for coverage to apply. Traditionally, the indemnity period in boiler and machinery combination coverage forms has been the time between the date of the direct damage loss and the date when repairs or replacement of damaged property is complete. The 1991 and prior ISO boiler and machinery business interruption endorsements are typical in this respect.

However, some businesses might continue to suffer income loss even after the completion of repairs. In some cases, the insured's customers may not be aware that the insured is back in business, or they have made alternate contractual arrangements that must run their course.

The 1995 edition ISO combination endorsements (but not the prior editions) provide coverage for 5 consecutive days after the date when repairs are complete. Some insurer forms grant coverage for 30 days after completion of repairs, or for the number of days specified in the declarations. Regardless of the length of the indemnity period established in a particular combination form, it can virtually always be increased for a specified number of days, using an extended period of indemnity endorsement. In the ISO boiler and machinery forms portfolio, the appropriate endorsement is BM 15 38, extended period of restoration.

The 5-day extended period of indemnity in the 1995 edition ISO combination forms applies to both business interruption and extra expense coverage. The same is true of any additional period of time established in an extended period of restoration endorsement. However, the 1995 edition of the ISO extra expense form does not include the 5-day extension, and the extended period of restoration endorsement is not intended for use with the extra expense coverage endorsement. In the insurer forms that grant coverage for 30 or more days after the date when repairs are complete, the extended period of indemnity often applies only to business income loss, and not to extra expense loss.

Nearly all combination forms exclude from coverage any additional time needed for repairs or replacement as a result of the enforcement of any ordinance or law, either in the indemnity period provision or elsewhere in the policy. Interestingly, there is no preprinted endorsement to add back coverage for increased time to repair, replace, or rebuild as a result of ordinance enforcement in the ISO boiler and machinery forms portfolio—although there is such an endorsement in the ISO commercial property forms portfolio (CP 15 31, ordinance or law—increased period of restoration). Probably the reason for this difference is that relatively few boiler and machinery policy losses cause damage to the building housing the covered equipment. However, some insureds do have an ordinance enforcement time element exposure. For example, a steam boiler explosion could certainly damage the insured's building badly enough to trigger a local building ordinance and extend the time needed to restore operations. There are less obvious exposures as well, particularly those associated with electrical wiring that is often part of the building. Fortunately, time element coverage in connection with direct damage demolition/increased cost of construction coverage is available from most boiler and machinery insurers, despite the lack of an ISO endorsement.

## Exceptions to Direct Damage Exclusions

When time element coverage is included by endorsing the coverage provided in the direct damage coverage form, all of the provisions that apply to the coverage provided by the time element endorsement. However, most boiler and machinery combination endorsements stipulate that the following exclusions in the basic form do not apply to the coverage provided by the endorsement.

- A delay in, or interruption of, any business, manufacturing, or process activity
- Lack of power, light, heat, steam, or refrigeration

An exclusion of coverage for delay or interruption of business is clearly incompatible with an endorsement providing business interruption coverage. Exempting time element coverage from this exclusion merely eliminates the obvious inconsistency between the basic direct damage coverage form and the time element coverage endorsement.

The 1991 and prior editions of the ISO boiler and machinery business interruption endorsements also stipulate that the exclusion of "any other indirect result of an accident to an object" does not apply to time element coverage. However, this exemption was omitted in the

1995 edition, since the business interruption coverage endorsements provide coverage only for specified types of indirect loss.

## Spoilage Time Element Coverage

A covered accident could well damage power generating equipment owned by the insured and located on the insured's premises. Exempting the coverage provided by a combination time element endorsement from the lack of power exclusion has the effect of providing coverage for income and expense loss that results from the insured's inability to generate power with its own damaged equipment.

Exempting time element coverage from the exclusion of coverage for lack of power, light, heat, steam, or refrigeration has another important consequence that may not be immediately obvious. It has the effect of granting time element coverage in connection with spoilage loss. In other words, even if the direct damage form is not endorsed to cover spoilage from a covered accident, boiler and machinery time element endorsements *do* provide coverage for income or expense loss resulting from spoilage of perishable goods caused by a covered accident.

## Utility Interruption Endorsement

However, utility service interruption coverage must be added by endorsement. Even though the lack of power exclusion does not apply to time element coverage, objects owned by a utility and located away from the insured's premises shown in the policy schedule do not qualify as covered objects. For this reason, there is no coverage for loss resulting from utility service interruption originating off premises unless the policy has been endorsed to provide utility interruption coverage. Most insurers use a single endorsement to provide both direct damage and time element coverage; the ISO endorsement is BM 15 35, utility interruption.

## Additional Exclusions

Boiler and machinery combination endorsements generally impose three additional exclusions not found in the basic form.

- Interruption of business that would not have been carried on even if the accident had not occurred
- Failure of the insured to resume business at covered locations with due diligence and dispatch
- Suspension, lapse, or cancellation of a contract

## Idle Periods

There is no coverage for business interruption, or for extra expense to carry on business operations, for business that would not have been conducted even if there had been no covered accident to covered equipment. For example, suppose that a manufacturer schedules plant closing during the last 2 weeks of July every year. If a boiler and machinery accident were to force a shutdown or makeshift operations for the entire month of July, the insured manufacturer would collect only for loss occurring during the part of the month when the plant was scheduled to be operational. Another example of the operation of this exclusion has to do with utility interruption. Suppose that a covered accident at the premises of the insured were to take place at a time when the electric utility supplying power to the insured's area was unable to do so because of an equipment breakdown at its premises. Unless the insured has purchased utility interruption coverage by endorsement, the insurer might—with some justification—maintain that there is no coverage for business interruption or extra expense during the period of time when the electric utility is unable to supply power to the area. Even if there had been no accident at the insured's premises, the insured's operations would have been affected by the inability of the electric utility to supply power to the area.

## Resumption of Normal Operations

All time element coverage forms, boiler and machinery as well as commercial property, include some sort of language to the effect that the insured is required to resume normal operations as soon as possible. Boiler and machinery combination forms are no exception. They contain an exclusion of coverage for loss resulting from the insured's failure to make every effort to resume normal operations as soon as possible.

Strictly read, this exclusion might seem to void coverage altogether if the insured does not act expeditiously to resume normal operations. However, it is interesting and probably very significant that the language of the resumption of operations provisions in current ISO commercial property time element forms makes it clear that the resumption of operations provisions act only to limit loss recovery to the amount that would have been incurred if the insured had resumed operations with due diligence and dispatch. The resumption of operations language in current ISO boiler and machinery time element forms is much like the language in pre-1991 ISO commercial property time element forms, and there is no logical reason for such provisions to apply differently to boiler and machinery time element coverage than to commercial property coverage. Therefore, it seems reasonable to assume that the intent of the resumption of operations and reduction of loss provisions in boiler and machinery forms is the same as in commercial property forms.

## Loss of Contract

A lengthy—or even just ill-timed—shutdown or period of makeshift operations could cause a business to lose not only orders for goods and services to be produced during the time when repairs are in progress, but perhaps even an entire contract to supply goods or services for

months or years after completion of repairs. The loss of contract exclusion, also found in commercial property time element forms, stipulates that there is no coverage for loss or expense resulting from the suspension, lapse, or cancellation of a contract beyond the time when business could be resumed.

This provision reinforces the indemnity period provision found in most boiler and machinery time element forms, which allows for recovery only of loss suffered during the period of time between the accident date and the date when damaged property has been repaired or replaced (and in some forms during a specified number of days after completion of repairs). Most commercial property time element forms have the same indemnity period; the only exception is gross profits business interruption forms, discussed on pages II.E.12 and VII.G.3.

## Coinsurance and Annual Reports

Most actual loss sustained combination forms *require* the insured to submit "annual reports" of business interruption values on "approved report forms" furnished by the insurer. An ISO business interruption report of values form (BM 15 31) or an insurer version of that form serves as the approved report form. The only difference between a commercial property business interruption work sheet and a boiler and machinery business interruption report of values is that the boiler and machinery form has an entry for ordinary payroll expense under deductions.

Actual loss sustained combination endorsements nearly always contain what amounts to a 100 percent coinsurance clause. If the actual total of net profits plus fixed charges and expenses as determined at the time of the accident is greater than the estimated total of the same items shown on the required annual report of business interruption values, the insured can collect only a percentage of the loss: the ratio of the actual total to the estimated total. Exhibit XI.H.2 on page XI.H.9 illustrates the operation of the coinsurance clause.

Fortunately, the coinsurance clause in actual loss sustained boiler and machinery business interruption and combination forms can be suspended by endorsement. The ISO endorsement is BM 15 32, conditional suspension of coinsurance. It suspends the coinsurance provision as long as the insured submits business interruption reports of values as required.

In the 1995 edition of the ISO actual loss sustained combination coverage endorsement, the coinsurance clause applies only if the insurer does not receive the insured's annual report of values within 3 months of the due date. With this approach, there is no need for a separate endorsement suspending the coinsurance clause.

Commercial property forms differ somewhat from boiler and machinery forms with respect to reports of value and coinsurance. Although nearly all commercial property combination forms include a coinsurance provision, the applicable percentage is usually only 50 to 80 percent of the annual business interruption value, rather than 100 percent. Another difference is that most commercial property business interruption forms apply the coinsurance clause to the 12-month period beginning with policy inception, rather than to the 12-month period beginning with the date of direct damage. Finally, commercial property combination forms usually specify that the coinsurance clause does not apply to extra expense coverage; boiler and machinery

combination forms usually do not make that stipulation. Also, commercial property combination forms usually do not require the insured to submit business interruption work sheets. As a practical matter, however, most property insurers insist on them as a condition of suspending the operation of the coinsurance clause, which is accomplished either by activation of an "agreed value" option that is written into the form or by attachment of an "agreed amount" endorsement.

## **Coinsurance Applies to Extra Expense**

Extra expense forms typically impose a monthly limitation on loss recovery, expressed as a percentage of the total extra expense limit. Combined business interruption and extra expense forms do not contain a similar percentage monthly limitation provision.

However, a dollar amount monthly limit applies to both business interruption and extra expense coverage under a valued combination endorsement. And any coinsurance penalty that applies under an actual loss sustained combination form applies to the extra expense portion of the recovery as well as to the business interruption portion of the loss. This is different from commercial property combination forms, which do not normally apply a coinsurance penalty to the extra expense portion of the coverage.

## **No Coinsurance in Valued Forms**

Valued combination forms, like valued boiler and machinery business interruption endorsements, do not contain a coinsurance provision. In the event of covered business interruption, the insured is entitled to receive the monthly limit amount shown in the declarations or endorsement schedule for each month of totally interrupted operations, and a portion of the monthly limit for each day of partially interrupted operations. There is no possibility of a coinsurance penalty—although it is entirely possible for the selected monthly limit to be inadequate in comparison to the amount actually lost by the insured business.

## **Premium Adjustment**

Actual loss sustained combination endorsements provide for annual adjustment of premium based on the required reports of business interruption values. The insured may have to pay an additional premium at year end, if business results turn out better than projected. On the other hand, if business results fall short of what was projected, the insured will receive a return premium. The most that the insurer will return is 75 percent of the original premium charged. Valued combination endorsements, like their valued business interruption counterparts, normally do not provide for premium adjustment.

## Limits of Insurance

Valued combined business interruption and extra expense forms establish two limits: a monthly limit, which is the amount the insured is entitled to collect for each month of fully suspended operations; and a limit of loss, which applies per accident. Actual loss sustained combined forms establish a single limit of loss, which applies per accident. The language in both types of forms specifies that these limits are not sublimits, but instead separate additional limits.

Keep in mind that the stated limit of insurance applies to both business interruption loss and extra expense loss. If the insured could conceivably incur extra expenses that would exceed the projected annual income, the limit of insurance should be based on the projected extra expenses, rather than on the projected income. Similarly, if the insured's operations could be shut down for more than 12 months as a result of a covered accident, the limit of insurance should be based on the appropriate multiple of the annual business interruption value shown on the work sheet.

## Limitations on Loss Recovery

In actual loss sustained combination forms, the limit shown in the declarations or in the endorsement schedule is not necessarily the amount that the insured will receive in the event of loss. It is merely the maximum that the insurer will pay. In the event of loss the insured will receive the "actual loss" as defined in the policy, taking into account the "actual experience of your business before the accident and the probable experience you would have had without the accident." Exhibit XI.H.3 on page XI.H.12 shows the definition of actual loss found in both the ISO actual loss sustained business interruption and combined business interruption and extra expense endorsements.

In valued combination forms, however, the insured does receive the monthly limit amount shown in the declarations or the schedule on the front page of the endorsement for each month of totally interrupted operations, subject to the limit of loss shown, which applies per accident. For each month during which the insured's operations are only partially interrupted, the insured recovers a proportionate share of the daily limit, subject to the per accident limit of loss shown.

## Extra Expense Loss Recovery

Combined business interruption and extra expense forms provide full extra expense coverage, not limited to the amount that the expenditures reduce the business interruption loss. The full extra expense coverage provided by a combination form is the advantage it provides over a business interruption form.

Nevertheless, there are a several factors that may limit extra expense loss recovery. Keep in mind that the extra expense coverage provided in both valued and actual loss sustained forms

is provided on an actual loss sustained basis. That is, the insured will be paid, not a predetermined sum, but the expenses actually incurred—subject to the coverage limit for business interruption and extra expense.

### ***Coinsurance Clause Applies***

As previously mentioned, in boiler and machinery combination forms the coinsurance clause limits the insured's recovery for extra expense loss. This is true despite the fact that compliance with the coinsurance clause is based only on the adequacy of the values shown on the insured's report of business interruption values.

### ***Necessary Expenses***

Also, remember that in the coverage grant the insurer agrees to pay "the extra expense you *necessarily* incur ...." (Emphasis added.) This is echoed in the definition of extra expense, which includes the statement that "extra expense does not include expense in excess of what is necessary to keep your business operating as nearly normal as practicable." There may be some room for honest disagreement between the insurer and the insured about what expenses are necessary.

### ***Deduction for Salvage Value of Temporary Equipment***

Most extra expense endorsements include a loss payment provision that allows the insurer to deduct from the loss payment amount the salvage value of any temporary or substitute equipment used during the period of restoration that is retained by the insured.

### ***Expediting Expense Limitation***

Boiler and machinery direct damage forms nearly always provide at least a small amount of expediting expense coverage, regardless of whether a time element coverage endorsement is attached. The extra expense coverage provided in combined business interruption and extra expense endorsements also applies to expediting expenses, although the language used is different. However, under an extra expense or combined business interruption and extra expense endorsement, loss recovery for expediting expenses is limited to the amount by which the expenses incurred actually do reduce the amount otherwise payable to the insured. In other words, expediting expenses are covered only to the extent that they reduce the extra expense loss amount that the insurer would otherwise have to pay. The portion of the extra expense definition (found in both the extra expense and the combined business interruption and extra expense forms) that contains the expediting expense limitation is shown in Exhibit XI.I.2 on page XI.I.9.



## Deductible Options

Boiler and machinery time element coverage is nearly always subject to a separate deductible that applies in addition to the direct damage deductible. Valued boiler and machinery combination endorsements normally have two deductible options.

- Time deductible
- Dollar deductible

When a time deductible applies, the insurer pays only for loss occurring after the specified number of hours or days immediately following the "commencement of liability." (Remember: the commencement of liability is at the time of the accident, or 24 hours *before* the insurer receives notice of the accident, whichever is later.) When a dollar deductible applies, the insurer pays only the portion of the loss that exceeds the indicated dollar amount.

Actual loss sustained boiler and machinery combination endorsements normally include a third deductible option as well: a multiple of daily value deductible. When a multiple of daily value deductible applies, the insurer pays only the portion of the loss that exceeds the dollar equivalent of the specified multiple of the daily business interruption value during the period of interruption. Suppose, for example, that the specified multiple is 3, and that it is determined at the end of the period of interruption that the daily business interruption value for that interruption was \$10,000. The multiple of daily value deductible for that particular business interruption loss would be \$30,000. Because that insured's daily business interruption value might be different for a different period of interruption, the multiple of daily value deductible for the same insured under the same policy might be a different amount for a different accident.

# BOILER AND MACHINERY COVERAGE FORM

Various provisions in this policy restrict coverage. Read the entire policy carefully to determine rights, duties and what is and is not covered.

Throughout this policy the words "you" and "your" refer to the Named Insured shown in the Declarations. The words "we", "us" and "our" refer to the Company providing this insurance.

Other words and phrases that appear in quotation marks have special meaning. Refer to Section F. - DEFINITIONS.

## A. COVERAGE

We will pay for direct damage to Covered Property caused by a Covered Cause of Loss.

### 1. Covered Property

Covered Property, as used in this Coverage Part, means any property that:

- a. You own; or
- b. Is in your care, custody or control and for which you are legally liable.

### 2. Property Not Covered

Covered Property does not include any:

- a. Electronic data processing, recording or storage media such as films, tapes, discs, drums or cells used in conjunction with an electronic computer or electronic data processing equipment;
- b. Data stored on this media; or
- c. Programming records used for electronic data processing or electronically controlled equipment;

whether or not the media or data is in actual use at the time of the "accident".

### 3. Covered Cause of Loss

~~A Covered Cause of Loss is an "accident"~~ to an "object" shown in the Declarations. An "object" must be in use or connected ready for use at the location specified for it at the time of the "accident".

### 4. Defense

- a. If there is damage to property of another in your care, custody or control and for which you are legally liable, that was directly caused by an "accident" to an "object," we will have the right and duty to

defend you against any "suit" alleging liability for damage to that property. However, we have no duty to defend you against any "suit" alleging liability for damage to property not covered by this Coverage Form.

- b. If a claim or "suit" is brought against you alleging that you are liable for damage to property of another that was caused by an "accident" to an "object", we will either:

- (1) Settle the claim or "suit"; or
- (2) Defend you against the "suit" but keep for ourselves the right to settle it at any point.

### 5. Coverage Extensions

#### a. Expediting Expenses

With respect to your damaged Covered Property, we will pay the reasonable extra cost to:

- (1) Make temporary repairs;
- (2) Expedite permanent repairs; and
- (3) Expedite permanent replacement.

We restrict the amount payable for Expediting Expenses as explained in the Limits of Insurance section of this Coverage Form.

#### b. ~~Automatic Coverage for A Newly Acquired Location~~

~~We will automatically cover an "accident" to an "object" at a newly acquired location. This automatic coverage begins at the time you acquire the property and continues for 90 days, under the following conditions:~~

- (1) You must inform us, in writing, of the newly acquired location within 90 days of the date you acquire it;
- (2) The "object" must be in use or connected ready for use at the time of acquisition and throughout the period of automatic coverage and be of a type that would be included in any "Object" Group Description shown in the Declarations;

- (3) The Limit of Insurance and Deductible amount will be the highest amounts shown in the Declarations for the same type of "object";
- (4) We will not be liable under this coverage for Consequential Damage, Business Interruption, or any other indirect loss resulting from an "accident" to an "object"; and
- (5) ~~You agree to pay an additional premium as determined by us.~~

**c. Supplementary Payments**

We will pay, with respect to any claim or any "suit" we defend:

- (1) All expenses we incur;
- (2) The cost of bonds to release attachments, but only for bond amounts within the Limit of Insurance. We do not have to furnish these bonds;
- (3) All reasonable expenses incurred by you at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to \$100 a day because of time off from work;
- (4) All costs taxed against you in any "suit" we defend;
- (5) Pre-judgment interest awarded against you on that part of the judgment we pay. If we make an offer to pay the applicable Limit of Insurance, we will not pay any pre-judgment interest based on that period of time after the offer; and
- (6) All interest on the full amount of any judgment that accrues after entry of the judgment and before we have paid, offered to pay, or deposited in court the part of the judgment that is within the Limit of Insurance shown in the Declarations.

These payments will not reduce the Limit of Insurance.

**B. EXCLUSIONS**

We will not pay for loss or damage caused directly or indirectly by any of the following. Such loss or damage is excluded regardless of any other cause or event that contributes concurrently or in any sequence to the loss.

**1. Ordinance or Law**

Any increase in loss caused by or resulting from the enforcement of any ordinance, law, regulation, rule or ruling regulating or restricting repair, replacement, alteration, use, operation, construction or installation. As used here, increase in loss also includes expenses incurred beyond those for which we would have paid if no "hazardous substance" had been involved in the "accident".

**2. Earth Movement**

Any earth movement, including but not limited to earthquake, landslide, mudslide, subsidence or volcanic eruption.

**3. Nuclear Hazard**

Nuclear reaction or radiation, or radioactive contamination, however caused.

**4. War and Military Action**

- a. War, including undeclared or civil war;
- b. Warlike action by a military force, including action in hindering or defending against an actual or expected attack, by any government, sovereign or other authority using military personnel or other agents; or
- c. Insurrection, rebellion, revolution, usurped power or action taken by governmental authority in hindering or defending against any of these.

**5. Flood, surface water, waves, tides, tidal waves, overflow of any body of water, or their spray, all whether driven by wind or not.**

**6. Lack of power, light, heat, steam or refrigeration.**

**7. An explosion. However, we will pay for direct loss or damage caused by an explosion of an "object" of a kind specified in a. through g. below, if covered by this insurance and described on an Object Definitions endorsement that is a part of this policy, and is not otherwise excluded in this Section B.:**

- a. Steam boiler;
- b. Electric steam generator;
- c. Steam piping;
- d. Steam turbine;
- e. Steam engine;
- f. Gas turbine; or
- g. Moving or rotating machinery when such explosion is caused by centrifugal force or mechanical breakdown.

8. Fire or explosion that occurs at the same time as an "accident" or that ensues from an "accident". With respect to any electrical equipment forming a part of an "object", this exclusion is changed to read:

Fire or explosion outside the "object" that occurs at the same time as an "accident" or ensues from an "accident".

9. The explosion of gas or unconsumed fuel within the furnace of any boiler or fired vessel or within the passages from that furnace to the atmosphere, whether or not the explosion is:

- a. Contributed to or aggravated by an "accident" to any part of an "object" that contains steam or water; or
- b. Caused in whole or in part by an "accident" to an "object" or part of an "object".

10. An "accident" that is the result of an explosion or fire.

11. An "accident" to any "object" while being tested.

12. Water or other means used to extinguish a fire, even when the attempt is unsuccessful.

13. An "accident" to:

- a. Electronic data processing, recording or storage media such as films, tapes, discs, drums or cells used in conjunction with an electronic computer or electronic data processing equipment;
- b. Data stored on this media; or
- c. Programming records used for electronic data processing or electronically controlled equipment;

whether or not the media or data is in actual use at the time of the "accident".

14. An "accident" that is caused by any of the following causes of loss if coverage for that cause of loss is provided by another policy of insurance you have:

- a. Aircraft or Vehicles;
- b. Lightning;
- c. Sinkhole Collapse;
- d. Smoke;
- e. Sprinkler Leakage; or
- f. Weight of Snow, Ice or Sleet.

15. An "accident" that is caused by either of the following causes of loss:

- a. Windstorm or Hail; or
- b. Freezing, caused by cold weather.

16. A delay in, or an interruption of, any business, manufacturing or processing activity.

17. Any other indirect result of an "accident" to an "object".

C. **LIMITS OF INSURANCE**

1. ~~We will not pay more than the applicable Limit of Insurance shown in the Declarations for all direct damage to Covered Property that results from any "one accident".~~

2. The following coverage limitations to our payment for direct damage to Covered Property are part of and not in addition to the Limit of Insurance for this Coverage Form.

a. **Expediting Expenses**

Our payment for Expediting Expenses will be limited to:

(1) \$25,000; or

(2) What is left of the Limit of Insurance after we pay your loss for Covered Property damaged by an "accident";

whichever is less.

b. **Hazardous Substance Limitation**

The following applies despite the operation of the Ordinance or Law Exclusion. This limitation does not apply to damage, contamination or pollution caused by ammonia. If Covered Property is damaged, contaminated or polluted by a "hazardous substance" as a result of an "accident" to an "object", the most we will pay for any additional expenses incurred by you for clean up, repair or replacement or disposal of that property is \$25,000. As used here, additional expenses mean expenses incurred beyond those for which we would be liable if no "hazardous substance" had been involved.

c. **Ammonia Contamination Limitation**

If Covered Property is contaminated by ammonia as a result of an "accident" to an "object", the most we will pay for this kind of damage, including salvage expense, is \$25,000.

d. **Water Damage Limitation**

If Covered Property is damaged by water as a result of an "accident" to covered refrigerating or air conditioning vessels and piping, the most we will pay for this kind of damage, including salvage expense, is \$25,000.

Any payment made under Section C will not increase if more than one insured is shown in the Declarations.

**D. DEDUCTIBLE**

We will not pay for loss or damage resulting from any "one accident" until the amount of loss or damage exceeds the Deductible shown in the Declarations. We will then pay the amount of loss or damage in excess of the Deductible, up to the applicable Limit of Insurance. If more than one "object" is involved in "one accident", only the highest Deductible will apply.

**E. BOILER AND MACHINERY CONDITIONS**

The following conditions apply in addition to the Common Policy Conditions:

**1. Loss Conditions**

**a. Abandonment**

There can be no abandonment of any property to us.

**b. Appraisal**

If we and you disagree on the value of the property or the amount of loss, either may make written demand for an appraisal of the loss. In this event, each party will select a competent and impartial appraiser. The two appraisers will select an umpire. If they cannot agree, either may request that selection be made by a judge of a court having jurisdiction. The appraisers will state separately the value of the property and amount of loss. If they fail to agree, they will submit their differences to the umpire. A decision agreed to by any two will be binding. Each party will:

- (1) Pay its chosen appraiser; and
- (2) Bear the other expenses of the appraisal and umpire equally.

If there is an appraisal, we will still retain our right to deny the claim.

**c. Duties In the Event of Loss or Damage**

- (1) You must see that the following are done in the event of loss or damage:
  - (a) Give us a prompt notice of the loss or damage. Include a description of the property involved.
  - (b) As soon as possible, give us a description of how, when and where the loss or damage occurred.

(c) Allow us a reasonable time and opportunity to examine the property and premises before repairs are undertaken or physical evidence of the "accident" is removed. But you must take whatever measures are necessary for protection from further damage.

(d) Permit us to inspect the property and records proving the loss or damage. Also permit us to take samples of damaged property for inspection, testing and analysis.

(e) If requested, permit us to question you under oath, at such times as may be reasonably required about any matter relating to this insurance or your claim, including your books and records. In such event, your answers must be signed.

(f) Send us a signed, sworn statement of loss containing the information we request to settle the claim. You must do this within 60 days after our request.

(g) Cooperate with us in the investigation or settlement of the claim.

(2) We may examine any insured under oath, while not in the presence of any other insured and at such times as may be reasonably required, about any matter relating to this insurance or the claim, including an insured's books and records. In the event of an examination, an insured's answers must be signed.

**d. Insurance Under Two or More Coverages**

If two or more of this policy's coverages apply to the same loss or damage, we will not pay more than the actual amount of the loss or damage subject to the Limit of Insurance.

**e. Legal Action Against Us**

No one may bring a legal action against us under this Coverage Part unless:

- (1) There has been full compliance with all the terms of this Coverage Part; and
- (2) The action is brought within 2 years after the date of the "accident"; or

- (3) We agree in writing that you have an obligation to pay for damage to Covered Property of others or until the amount of that obligation has been determined by final judgment or arbitration award. No one has the right under this policy to bring us into an action to determine your liability.

**f. Loss Payable Clause**

- (1) ~~We will pay you and the loss payee shown in the Declarations for loss due to an "accident" to an "object", as interests may appear. The insurance covers the interest of the loss payee unless the loss results from conversion, secretion or embezzlement on your part.~~

- (2) We may cancel the policy as allowed by the Cancellation Condition. Cancellation ends this agreement as to the loss payee's interest.

If we cancel we will mail you and the loss payee the same advance notice.

- (3) If we make any payment to the loss payee, we will obtain their rights against any other party.

**g. Other Insurance**

- (1) You may have other insurance subject to the same plan, terms, conditions and provisions as the insurance under this Coverage Part. If you do, we will pay our share of the covered loss or damage. Our share is the proportion that the applicable Limit of Insurance under this Coverage Part bears to the Limits of Insurance of all insurance covering on the same basis.

- (2) If there is other insurance covering the same loss or damage, other than that described in (1) above, we will pay only the amount of covered loss or damage in excess of the amount due from that other insurance, whether you can collect on it or not.

In no case will we pay more than the applicable Limit of Insurance.

**h. Privilege to Adjust with Owner**

In the event of loss or damage involving property of others in your care, custody or control, we have the right to settle the loss or damage with the owner of the property. A receipt for payment from the owners of that property will satisfy any claim of yours.

**i. Transfer of Rights of Recovery Against Others To Us**

If any person or organization to or for whom we make payment under this Coverage Part has rights to recover damages from another, those rights are transferred to us to the extent of our payment. That person or organization must do everything necessary to secure our rights and must do nothing after loss to impair them.

**j. Valuation**

- (1) ~~We will pay you the amount you spend to repair or replace your property directly damaged by an "accident". Our payment will be the smallest of:~~

~~(a) The Limit of Insurance;~~

- (b) The cost at the time of the "accident" to repair the damaged property with property of like kind, capacity, size and quality;

- (c) The cost at the time of the "accident" to replace the damaged property on the same site with other property:

(i) Of like kind, capacity, size and quality; and

~~(ii) Used for the same purpose;~~

- (d) The amount you actually spend that is necessary to repair or replace the damaged property.

- (2) As respects any "object", if the cost of repairing or replacing only a part of the "object" is greater than:

(a) The cost of repairing the "object"; or

(b) The cost of replacing the entire "object" on the same site;

we will pay only the smaller of (a) or (b).

The repair parts or replacement "object" must be:

(c) Of like kind, capacity, size and quality; and

(d) Used for the same purpose.

The cost of repair or replacement in (1) and (2) above does not include the increased cost attributable to enforcement of any ordinance or law regulating the construction, use or repair of any property.

(3) We will not pay you:

- (a) If the loss or damage is to property that is obsolete or useless to you; or
  - (b) For any extra cost if you decide to repair or replace the damaged property with property of a better kind or quality or of larger capacity.
- (4) If you do not repair or replace the damaged property within 18 months after the date of the "accident", then we will pay only the smaller of the:
- (a) Cost it would have taken to repair; or
  - (b) Actual cash value;
- at the time of the "accident".

Paragraph (4) does not apply to any time period beyond the 18 months that we agree to in writing.

2. General Conditions

a. Additional Insured

If a person or organization is designated in this Coverage Part as an additional insured, we will consider them to be an insured under this Coverage Part to the extent of their interest.

b. Bankruptcy

The bankruptcy or insolvency of you or your estate will not relieve us of an obligation under this Coverage Part.

c. Liberalization

If we adopt any standard form revision for general use that would broaden coverage in this Coverage Part without additional premium, the broadened coverage will immediately apply to this Coverage Part if the revision is effective within 45 days prior to or during the policy period.

d. No Benefit to Bailee

No person or organization, other than you, having custody of Covered Property, will benefit from this insurance.

e. Object Group

All "objects" in use or connected ready for use and included in an "Object" Group Definition will be considered as individually described in the Declarations. The premiums for "objects" included in an "Object" Group Description will be adjusted as follows:

- (1) We will base the initial premium for these "objects" on information we obtain. The rates charged will be those in effect on the first day of coverage.
- (2) We will charge an additional premium for "objects" that are added to the policy after the effective date of this policy. The additional premium for these "objects" will be computed pro rata.
- (3) We will allow a return premium for "objects" that are removed from the policy after the effective date of the policy. The return premium will be computed pro rata from the time the "objects" are disconnected.

f. Policy Period, Coverage Territory

Under this Coverage Part:

(1) The "accident" must occur:

- (a) During the Policy Period shown in the Declarations; and
- (b) Within the coverage territory.

(2) The coverage territory is:

- (a) The United States of America; and
- (b) Puerto Rico.

g. Concealment, Misrepresentation or Fraud

This Coverage Part is void in any case of fraud by you relating to it. It is also void if you intentionally conceal or misrepresent a material fact concerning:

- (1) This Coverage Part;
- (2) The Covered Property; or
- (3) Your interest in the Covered Property.

h. Suspension

Whenever an "object" is found to be in, or exposed to, a dangerous condition, any of our representatives may immediately suspend the insurance against loss from an "accident" to that "object". This can be done by delivering or mailing a written notice of suspension to:

- (1) Your last known address; or
- (2) The address where the "object" is located.

Once suspended in this way, your insurance can be reinstated only by an endorsement for that "object".

If we suspend your insurance, you will get a pro rata refund of premium for that "object". But the suspension will be effective even if we have not yet made or offered a refund.

**F. DEFINITIONS**

1. "Accident" means a sudden and accidental breakdown of the "object" or a part of the "object". At the time the breakdown occurs, it must manifest itself by physical damage to the "object" that necessitates repair or replacement.

None of the following is an "accident":

- a. Depletion, deterioration, corrosion or erosion;
- b. Wear and tear;
- c. Leakage at any valve, fitting, shaft seal, gland packing, joint or connection;
- d. Breakdown of any vacuum tube, gas tube or brush;
- e. Breakdown of any electronic computer or electronic data processing equipment;
- f. Breakdown of any structure or foundation supporting the "object" or any of its parts; or
- g. The functioning of any safety or protective device.

Turbine Units may have a separate definition of "accident". If so, refer to the Declarations for the appropriate accident definition.

If a strike, riot, civil commotion, act of sabotage or vandalism results in an "accident", this insurance applies. However, the War and Military Action Exclusion and the conditions of this Coverage Part still apply.

2. "Hazardous Substance" means a substance declared to be hazardous to health by a governmental agency.
3. "Object" means the equipment shown in the Declarations. Full description of specific "object" categories are found in the Object Definitions endorsement attached to this Coverage Form.
4. "One Accident" means:  
If an initial "accident" causes other "accidents" all will be considered "one accident". All "accidents" at any one location that manifest themselves at the same time and are the result of the same cause will be considered "one accident".
5. "Suit" means a civil proceeding and includes:
  - a. An arbitration proceeding in which damages are claimed and to which you must submit or do submit with our consent; or
  - b. Any other alternative dispute resolution proceeding in which damages are claimed and to which you submit with our consent.



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## OBJECT DEFINITIONS NO. 1—PRESSURE AND REFRIGERATION OBJECTS

This endorsement modifies insurance provided under the following:

### BOILER AND MACHINERY COVERAGE FORM

#### 1. BOILERS, FIRED VESSELS AND ELECTRIC STEAM GENERATORS

a. "Object" means:

Any boiler, fired vessel or electric steam generator shown in the Declarations and includes any:

- (1) Steel economizer used solely with them; and
- (2) Metal steam boiler piping, valves, fittings, traps and separators; but only if they:
  - (a) Are on your premises or between parts of your premises; and
  - (b) Contain steam or its condensate generated in whole or in part in an "object"; and
- (3) Metal feed water piping between any steam boiler and a feed pump or injector.

b. "Object" does not mean:

- (1) Any part not containing steam or water;
- (2) Any boiler setting;
- (3) Any insulating or refractory material;
- (4) Any piping not containing steam or its condensate;
- (5) Any buried piping;
- (6) Piping, radiators, coils, vessels or apparatus, other than those included above;
- (7) Any reciprocating or rotating machine; or
- (8) Any electrical apparatus.

c. Any of the following vessels listed below are included within the provisions of this section when used with an "object":

- (1) Condensate return tank;

- (2) Cushion or expansion tank used with a hot water heating boiler; and

- (3) Indirect water heater tank used for hot water supply service but only if it:

- (a) Is directly in the water circulating system of the "object" it is used with; and

- (b) Does not form part of a storage water tank.

- d. For any boiler or fired vessel, the furnace of the "object" and the gas passages from there to the atmosphere will be considered as outside the "object".

- e. An "object" using a heat transfer medium other than water or steam will be covered as though the medium were water and steam.

#### 2. UNFIRED VESSELS

- a. "Object" means any unfired vessel shown in the Declarations. However, "object" does not include any:

- (1) Electric steam generator;
- (2) Part of a vessel that is not under:
  - (a) Pressure of the contents of the vessel; or
  - (b) Internal vacuum;
- (3) Insulating or refractory material;
- (4) Reciprocating or rotating apparatus within or forming a part of the vessel;
- (5) Electrical apparatus within or forming a part of the vessel;
- (6) Piping leading to and from the vessel;
- (7) Buried vessel or piping;
- (8) Cylinder containing a movable plunger or piston; or

- d. Breakdown of any structure or foundation supporting the "object" or any of its parts; or
- e. The functioning of any safety or protective device.

If a strike, riot, civil commotion, act of sabotage or vandalism results in an "accident", this insurance applies. However, the War and Military Action Exclusion and the conditions of this Coverage Part still apply.

- 2. "Hazardous Substance" means a substance declared to be hazardous to health by a governmental agency.
- 3. "Location" means the premises at the address shown in the Declarations.
- 4. "Object" means any of the following equipment:
  - a. Any boiler;
  - b. Any fired or unfired vessel subject to vacuum or internal pressure other than weight of contents;
  - c. Any refrigerating or air conditioning system;
  - d. Any piping and its accessory equipment;
  - e. Any compressor, pump, engine, turbine, motor, generator, gear, gear set, fan or blower, including any shaft forming a part of the "object", together with any coupling, clutch, wheel or bearing on that shaft;
  - f. Any transformer or electrical distribution equipment; and
  - g. Any other mechanical or electrical equipment used for maintenance or service of the premises, but not used for processing or manufacturing.

However, "object" does not mean any:

- (1) Oven, or stove or furnace;
- (2) Structure, foundation or setting supporting or housing an "object";
- (3) Insulating or refractory material;
- (4) Computer or data processing equipment (unless used only to control or operate another "object" covered by this Coverage Part);

- (5) Equipment for communication, lighting, advertising, display, testing, experimental, research, diagnostic, therapeutic, surgical, dental, or pathological purposes;
- (6) Sewer piping;
- (7) Underground gas piping;
- (8) Piping forming part of sprinkler system;
- (9) Water piping other than boiler feedwater piping, boiler condensate return piping or water piping forming part of a refrigerating or air conditioning system used for cooling, humidifying or space heating;
- (10) "Object" that is being, or has been, manufactured for sale;
- (11) Vehicle, elevator, escalator, conveyor, hoist or crane; or
- (12) Other mechanical or electrical equipment used for processing or manufacturing.

5. "One Accident" means:

If an initial "accident" causes other "accidents" all will be considered "one accident". All "accidents" at any one "location" that manifest themselves at the same time and are the result of the same cause will be considered "one accident".

6. "Suit" means a civil proceeding and includes:

- a. An arbitration proceeding in which damages are claimed and to which you must submit or do submit with our consent; or
- b. Any other alternative dispute resolution proceeding in which damages are claimed and to which you submit with our consent.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## BUSINESS INTERRUPTION—VALUED COVERAGE

This endorsement modifies insurance provided under the following:

BOILER AND MACHINERY COVERAGE FORM

### SCHEDULE\*

"Location(s)" \_\_\_\_\_

Daily Limit \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

Limit of Loss \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

"Business" \_\_\_\_\_  
(Production, Sales, Rents or Income)

Deductible	Time	"Days"/Hours	(_____)
		Dollars	(\$ _____)

Covered "Objects" \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*Information required to complete this Schedule, if not shown on this endorsement, will be shown in the Declarations.

**A. COVERAGE**

1. We will pay you for your interruption of "business" during the "period of restoration" provided all of the following requirements are met:
  - a. The interruption must be caused solely by an "accident" to an "object";
  - b. The loss must be as a result of direct physical damage to Covered Property;
  - c. The "accident" must occur during the time this coverage is in force;
  - d. The "object" that has the "accident" must be:
    - (1) Specified as covered in the Business Interruption Schedule;
    - (2) At a "location" specified in the Business Interruption Schedule; and
    - (3) In use or connected ready for use.
2. We will pay:
  - a. The Daily Limit shown in the Business Interruption Schedule for each "day" during which your "business" is totally interrupted; or
  - b. A part of the Daily Limit shown in the Business Interruption Schedule for each "day" during a "partial interruption" of "business" at the "location(s)" specified in the Schedule. We will divide the "partial interruption" by the "average daily business". The resulting factor will then be multiplied by the Daily Limit to determine how much we will pay.
  - c. The reasonable extra expense incurred by you or us to reduce or prevent the interruption of "business". The amount we pay for extra expense is limited to the extent that any payment under paragraphs a. and b. is reduced.

**B. EXCLUSIONS**

All the Exclusions of the Boiler and Machinery Coverage Form apply to loss or expense under this endorsement except:

1. Lack of power, light, heat, steam or refrigeration; or
2. A delay in, or interruption of, any "business", manufacturing or process activity.

In addition we will not pay for any loss or expense due to:

3. The interruption of "business": that would not or could not have been carried on if the "accident" had not occurred;
4. Your failure to use due diligence and dispatch and all reasonable means to resume "business" at the "location(s)" shown in the Schedule; or
5. The suspension, lapse or cancellation of a contract following an "accident" extending beyond the time "business" could have resumed if the contract had not lapsed, been suspended or cancelled.

**C. DEDUCTIBLE**

**1. Time Deductible**

If a time deductible is shown in the Business Interruption Schedule, we will not be liable for any loss under this endorsement occurring during that specified time period immediately following the commencement of liability.

**2. Dollar Deductible**

If a dollar deductible is shown in the Business Interruption Schedule, we will first subtract the deductible amount we would otherwise pay under this endorsement. We will then pay the amount of loss or expense in excess of the deductible, up to the applicable Limit of Loss.

**D. CONDITIONS**

The following conditions apply in addition to the Common Policy Conditions and the Boiler and Machinery Conditions:

**1. Notice of Accident and Commencement of Liability**

At our expense, you must immediately give notice of "accident" to any of our offices. You must confirm that notice in writing. Our liability under this endorsement starts:

- a. At the time of the "accident"; or
- b. 24 hours before we receive notice of "accident";

whichever is later.

**2. Payment Limits**

Payment for loss or expense under this endorsement is subject to the following:

- a. The most we will pay for any one "day" for one or more "accidents" is the amount shown as the Daily Limit on the Business Interruption Schedule;

- b. Our total payment for any "one accident" for interruption of "business" or expenses will not exceed the Limit of Loss shown in the Business Interruption Schedule. This Limit of Loss is not a part of the Limit of Insurance, it is a separate limit;
- c. Our payment will not increase if more than one insured is shown on the Declarations;
- d. Loss or expense under this coverage from an "accident" that occurs during the time this coverage is in force may continue beyond the termination or expiration of this coverage. Our liability for that loss or expense is not limited by the termination or expiration; and
- e. Our payment under this endorsement for the interruption of "business" will be determined separately for each "day".

### 3. Reducing Your Loss

As soon as possible after an "accident" you must:

- a. Resume "business", partially or completely; and
- b. Make up lost "business" within a reasonable period of time. This reasonable period of time does not necessarily end when operations are resumed.
- c. Make use of every available means including:
  - (1) Working extra time or overtime, either at the "location" or at another location you acquire to carry on the same operations;
  - (2) The property or services of other concerns; and
  - (3) Merchandise or other property, such as surplus machinery, duplicate parts, equipment, supplies and surplus or reserve stock you own, control or can obtain.

### E. DEFINITIONS

- 1. "Average Daily Business" means the average "business" you had for the 30 days just before the "accident". In computing your "average daily business" we will use only those days in which there was "business" at the "location(s)" specified in Business Interruption Schedule.

### 2. "Business" means:

#### Word Entered in Business Interrup- tion Schedule

#### Meaning of Business

Production

Production at the "location" of your finished product, ready for packing, shipment or sale;

Sales

Gross sales at the "location";

Rents

Rents collectible at the "location";

Income

Gross income at the "location."

- 3. "Day" means a period of 24 consecutive hours. As respects the calculation of "business", a "day" begins at 12:01 a.m.
- 4. "Location" means the premises at the address shown on the Business Interruption Schedule.
- 5. "Partial Interruption" means a decrease in "business" during part or all of a "day" determined by subtracting the amount of total "business" at the "location(s)" for each "day" following an "accident" from the "average daily business".
- 6. "Period of Restoration" means the period of time that:
  - a. Begins at the time of the commencement of liability; and
  - b. Ends 5 consecutive days after the date when the damaged property at the described "location" is repaired or replaced.

"Period of Restoration" does not include any increased time period required by, caused by or resulting from enforcement of any item cited by the Ordinance or Law exclusion in the Boiler and Machinery Coverage Form.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## BUSINESS INTERRUPTION—ACTUAL LOSS SUSTAINED COVERAGE

This endorsement modifies insurance provided under the following:

BOILER AND MACHINERY COVERAGE FORM

### SCHEDULE\*

"Location(s)" \_\_\_\_\_

Limit of Loss \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

\_\_\_\_\_ Ordinary Payroll Coverage (applies only when an "X" is inserted)

Deductible \_\_\_\_\_ Time \_\_\_\_\_ Days/Hours \_\_\_\_\_ (\_\_\_\_\_)

Dollars \_\_\_\_\_ (\$ \_\_\_\_\_)

Multiple of Daily Value \_\_\_\_\_ (\_\_\_\_\_)

Optional Annual Report Date \_\_\_\_\_

Covered "Objects"

---

---

---

---

---

---

---

---

---

---

\*Information required to complete this schedule, if not shown on this endorsement, will be shown in the Declarations.

**A. COVERAGE**

1. We will pay you for your interruption of business during the "period of restoration" provided all of the following requirements are met:
  - a. The interruption must be caused solely by an "accident" to an "object";
  - b. The loss must be as a result of direct physical damage to Covered Property;
  - c. The "accident" must occur during the time this coverage is in force;
  - d. The "object" that has the "accident" must be:
    - (1) Specified as covered in the Business Interruption Schedule;
    - (2) At a "location" specified in the Business Interruption Schedule; and
    - (3) In use or connected ready for use.
2. We will pay:
  - a. Your "actual loss" from a total or partial interruption of business; and
  - b. The reasonable extra expense incurred by you or us to reduce or avert interruption of business. The amount we pay for extra expense is limited to the extent that our payment under paragraph a. is reduced.

We will consider the actual experience of your business before the "accident" and the probable experience you would have had without the "accident" in determining the amount of our payment.

3. Ordinary Payroll Coverage - If Ordinary Payroll Coverage is shown in the Business Interruption Schedule, the words - but not your ordinary payroll expense - are deleted from the definition of "actual loss".

**B. EXCLUSIONS**

All the Exclusions of the Boiler and Machinery Coverage Form apply to loss or expense under this endorsement except:

1. Lack of power, light, heat, steam or refrigeration; or
2. A delay in, or interruption of, any business, manufacturing or process activity.

In addition we will not pay for any loss or expense due to:

3. The interruption of business that would not or could not have been carried on if the "accident" had not occurred;

4. Your failure to use due diligence and dispatch and all reasonable means to resume business at the "location(s)" shown in the Schedule; and
5. The suspension, lapse or cancellation of a contract following an "accident" extending beyond the time business could have resumed if the contract had not lapsed, been suspended or cancelled.

**C. DEDUCTIBLE**

**1. Time Deductible**

If a time deductible is shown in the Business Interruption Schedule, we will not be liable for any loss under this endorsement occurring during that specified time period immediately following the Commencement of Liability.

**2. Dollar Deductible**

If a dollar deductible is shown in the Business Interruption Schedule, we will first subtract the deductible amount shown in the schedule from the amount we would otherwise pay under this endorsement. We will then pay the amount of loss or expense in excess of the deductible, up to the applicable Limit of Loss.

**3. Multiple of Daily Value Deductible**

If a multiple of daily value is shown in the Business Interruption Schedule, we will first subtract from the total amount we would otherwise pay, a dollar amount that is equal to the daily value during the period of interruption at the "location(s)" where the "loss" occurred, multiplied by the multiple specified on the Schedule. The daily value is the amount that would have been earned each working day had no "accident" occurred.

**D. CONDITIONS**

The following conditions apply in addition to the Common Policy Conditions and the Boiler and Machinery Conditions:

**1. Adjustment of Premium**

Upon receipt of the annual reports you furnish us, we will determine the amount of premium we earned for the past year. If the amount determined is more than the premium we have already charged for this coverage, you must pay the difference. If the amount determined is less than the premium we originally charged, we will refund the difference. However, the amount we return will not exceed 75% of the premium we originally charged.

## 2. Annual Reports

You must complete the Business Interruption - Report of Values worksheet once each year. Your initial report is due on the effective date of the policy. Subsequent reports are due on each anniversary of the policy, unless a date is shown on the Schedule. Your reports must reach us within three months of these due dates.

Statements of value may be substituted for the completed Business Interruption - Report of Values worksheet if the values on the statements are the same as those required by the worksheet.

## 3. Coinsurance

This Coinsurance condition applies only if we did not receive your due report within three months of the due date.

We will not pay the full amount of any loss if the Business Interruption "annual value" at the time of loss is greater than the "estimated annual value" shown in your previous report. Instead, we will determine the most we will pay using the following steps:

- a. Divide the "estimated annual value" last reported to us by the "annual value" at the time of the "accident";
- b. Multiply the total amount of the covered loss by the figure determined in paragraph a. above;
- c. Subtract the applicable Deductible from the amount determined in paragraph b. above;

The resulting amount or the Limit of Loss for Business Interruption, whichever is less, is the most we will pay. We will not pay for the remainder of the loss.

If more than one "location" is shown in the Schedule for this coverage, this Coinsurance Condition applies separately to each "location".

## 4. Notice of Accident and Commencement of Liability

At our expense, you must immediately give notice of "accident" to any of our offices. You must confirm that notice in writing. Our liability under this endorsement starts:

- a. At the time of the "accident"; or
- b. 24 hours before we receive notice of "accident";

whichever is later.

## 5. Payment Limits

Payment for loss or expense under this endorsement is subject to the following:

- a. Our total payment for any "one accident" for interruption of business or expenses will not exceed the Limit of Loss shown in the Business Interruption Schedule. This Limit of Loss is not part of the Limit of Insurance; it is a separate limit;
- b. Our payment will not increase if more than one insured is shown on the Declarations; and
- c. Loss or expense under this coverage from an "accident" that occurs during the time this endorsement is in force may continue beyond the termination or expiration of this endorsement. Our liability for that loss or expense is not limited by the termination or expiration;

## 6. Reducing Your Loss

As soon as possible after an "accident" you must:

- a. Resume business, partially or completely; and
- b. Make up lost business within a reasonable period of time. This reasonable period does not necessarily end when operations are resumed.
- c. Make use of every available means including:
  - (1) Working extra time or overtime, either at the "location" or at another location you acquire to carry on the same operations;
  - (2) The property or services of other concerns; and
  - (3) Merchandise or other property, such as surplus machinery, duplicate parts, equipment, supplies and surplus or reserve stock you own, control or can obtain.

## E. DEFINITIONS

1. "Actual loss" means the sum of:

- a. The net profits you fail to earn because of business interruption resulting from an "accident"; and



b. Whatever part of the following fixed charges and expenses the business failed to earn but would have earned if there had been no "accident":

- (1) Salaries and wages of officers, executives, employees under contract and other essential employees, as well as pensions and directors' fees but not your ordinary payroll expense; and
- (2) Manufacturing, selling, administrative expenses and any other items contributing to your overhead expenses.

In calculating the "actual loss", we will take into account the actual experience of your business before the "accident" and the probable experience you would have had without the "accident".

2. "Location" means the premises at the address shown on the Business Interruption Schedule.
3. "Annual Value" means the sum of net profits and "fixed charges and expenses" that would have been earned had the "accident" not occurred.
4. "Estimated Annual Value" means the sum of net profits and "fixed charges and expenses" as estimated by you in the most recent annual report.

5. "Fixed charges and expenses" means the sum of the following:

- a. Salaries and wages of officers, executives, employees under contract and other essential employees, as well as pensions and directors' fees but not your ordinary payroll expense; and
- b. Manufacturing, selling, administrative expenses and any other items contributing to your overhead expenses.

6. "Period of Restoration" means the period of time that:

- a. Begins at the time of the commencement of liability; and
- b. Ends 5 consecutive days after the date when the damaged property at the described "location" is repaired or replaced.

"Period of Restoration" does not include any increased time period required by, caused by or resulting from enforcement of any item cited by the Ordinance or Law exclusion in the Boiler and Machinery Coverage Form.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## EXTRA EXPENSE

This endorsement modifies insurance provided under the following:

BOILER AND MACHINERY COVERAGE FORM

### SCHEDULE\*

Location(s)

Limit of Extra Expense

Dollars (\$ \_\_\_\_\_)

Deductible

Dollars (\$ \_\_\_\_\_)

Covered "Objects"

---

---

---

---

---

Maximum Payment  
(% of Limit of Extra Expense)

_____	%
_____	%
_____	%
_____	%
_____	%
_____	%
_____	%
_____	%

Period of Restoration

less than one month
more than one, but less than 2 months
more than 2, but less than 3 months
more than 3, but less than 4 months
more than 4, but less than 5 months
more than 5, but less than 6 months
more than 6, but less than 7 months
more than 7, but less than 8 months

\*Information required to complete this schedule, if not shown on this endorsement, will be shown in the Declarations.

**A. COVERAGE**

We will pay you for your "Extra Expense" during the "Period of Restoration" provided all of the following requirements are met:

- a. The "Extra Expense" must be caused solely by an "accident" to an "object";
- b. The loss must be as a result of direct physical damage to Covered Property;
- c. The "accident" must occur during the time this coverage is in force;
- d. The "object" that has the "accident" must be:
  - (1) Specified as covered in the "Extra Expense" Schedule;
  - (2) At a "location" specified in the "Extra Expense" Schedule; and
  - (3) In use or connected ready for use.
- e. We will also pay the "Extra Expense" you necessarily incur to operate your business as nearly "normal" as practicable during the "restoration period" following an "accident".

**B. EXCLUSIONS**

1. All the Exclusions in the Boiler and Machinery Coverage Form apply to "Extra Expense" under this endorsement except:

Lack of power, light, heat, steam or refrigeration.
2. In addition we will not pay for any "Extra Expense" due to:
  - a. The interruption of business that would not or could not have been carried on if the "accident" had not occurred;
  - b. Your failure to use due diligence and dispatch and all reasonable means to operate your business as nearly "normal" as practicable at the "location(s)" shown in the Schedule; and
  - c. The suspension, lapse or cancellation of a contract following an "accident" extending beyond the time business could have resumed if the contract had not lapsed, been suspended or cancelled.

**C. DEDUCTIBLE**

If a dollar deductible is shown in the Extra Expense Schedule, we will first subtract the Deductible amount shown in the Schedule from the amount we would otherwise pay under this endorsement.

**D. CONDITIONS**

The following conditions apply in addition to the Common Policy Conditions and the Boiler and Machinery Conditions:

**1. Notice of Accident and Commencement of Liability**

At our expense, you must immediately give notice of "accident" to any of our offices. You must confirm any notice in writing. Our liability under this endorsement starts:

- a. At the time of the "accident"; or
- b. 24 hours before we receive notice of "accident";

whichever is later.

**2. Payment Limits**

Payment for "Extra Expense" under this coverage is subject to the following:

- a. The Limit of Extra Expense shown in the Schedule multiplied by the percentage of the Limit of Extra Expense specified for the length of the "Period of Restoration";

In the event that:

- (1) Your "Period of Restoration" exceeds the total "months" for which a percentage is entered; and
- (2) Our "Extra Expense" payments have not exhausted your insurance under this "Extra Expense" endorsement;

the unexhausted part of the Limit of Extra Expense is available for the remainder of the "Period of Restoration".

- b. Our total payment for any "one accident" for "Extra Expense" will not exceed the Limit of Extra Expense shown in the Schedule. The Limit of Extra Expense is not a part of the Limit of Insurance; it is a separate Limit.
- c. Our "Extra Expense" payment will not increase if more than one insured is named in the Declarations.

- d. "Extra Expense" from an "accident" that occurs during the time this endorsement is in force may continue beyond the termination or expiration of this endorsement. Our liability for such "Extra Expense" is not limited by the termination or expiration.
- e. The amount of our "Extra Expense" payment will reflect a deduction for the salvage value of any substitute or temporary equipment remaining after you resume normal operations.

**E. DEFINITIONS**

**1. "Extra Expense":**

- a. Means the cost of operating your business during the "Period of Restoration" minus what the cost of operating it would have been had no "accident" occurred. Included in "Extra Expense" are necessary emergency services, merchandise or other property of other concerns.
- b. May also include all or part of the cost of repairing or replacing property damaged or destroyed by an "accident". To qualify as "Extra Expense", that cost must be incurred for the purpose of minimizing the total of our "Extra Expense". The amount that we would include in our "Extra Expense" payment would be equal to:
  - (1) The savings in "Extra Expense" you have enabled us to realize by having the repairs or replacements made; or

- (2) The amount of "Extra Expense" you paid to have the repairs or replacements made;  
whichever is less.

**c. Does not mean:**

- (1) Loss of income; or
- (2) Expense in excess of what is necessary to keep your business operating as nearly "normal" as practicable.

- 2. "Location" means the premises at the address shown on the Extra Expense Schedule.
- 3. "Month" means a period of 30 consecutive days.
- 4. "Normal" means the condition that would have existed had no accident occurred.
- 5. "Period of Restoration" means the period of time that:
  - a. Begins at the time of the commencement of liability; and
  - b. Ends on the date when the damaged property at the described "location" is repaired or replaced.

"Period of Restoration" does not include any increased time period required by, caused by or resulting from enforcement of any item cited by the Ordinance or Law exclusion in the Boiler and Machinery Coverage Form.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## CONSEQUENTIAL DAMAGE

This endorsement modifies insurance provided under the following:

BOILER AND MACHINERY COVERAGE FORM

### SCHEDULE\*

Location(s)

Limit of Loss

Dollars (\$ \_\_\_\_\_)

Deductible

Dollars (\$ \_\_\_\_\_)

Coinsurance

( \_\_\_\_\_ %)

Specified Property

---

---

---

---

---

---

---

---

\*Information required to complete this schedule, if not shown on this endorsement, will be shown in the Declarations.

**A. COVERAGE**

1. We will pay you for "Consequential Damage" to "Specified Property" that is caused solely by an "accident" to an "object", provided all of the following requirements are met:
  - a. The "accident" must occur during the time this coverage is in force;
  - b. The "object" that has the "accident" must be:
    - (1) Specified as covered in the Consequential Damage Schedule;
    - (2) At a "location" specified in the Consequential Damage Schedule; and
    - (3) In use or connected ready for use.
2. We will also pay:
  - a. For loss to "Specified Property" of others for which you are legally liable; and
  - b. The reasonable expense incurred by you or us to reduce or avert "Consequential Damage". The amount we pay for that expense is limited to the amount that our payment under paragraphs 1. and 2.a. above is reduced.

**B. EXCLUSIONS**

1. All the exclusions of the Boiler and Machinery Coverage Form apply to loss and expense under this endorsement except:

Lack of power, light, heat, steam or refrigeration.
2. In addition, we will not pay for:
  - a. More than the actual cash value, at the time of the "accident", of your "Specified Property" damaged or destroyed, however caused. Actual cash value will include proper deductions for depreciation; or
  - b. Your failure to use due diligence and dispatch and all reasonable means to protect the "Specified Property" from damage following an "accident".

**C. DEDUCTIBLE**

If a dollar deductible is shown in the Consequential Damage Schedule, we will not pay for loss or expense resulting from any "one accident" until the amount of loss or expense exceeds the Deductible shown in the Declarations. We will then pay the amount of loss or expense in excess of the Deductible, up to the applicable Limit of Insurance. If more than one "object" is involved in "one accident", only the highest Deductible will apply.

**D. CONDITIONS**

The following conditions apply in addition to the Common Policy Conditions and the Boiler and Machinery Conditions:

**1. Coinsurance**

We will not pay the full amount of your loss if the Limit of Loss at the time of the "accident" is less than the product of the Coinsurance percentage shown in the Consequential Damage Schedule times the actual cash value of all "Specified Property" at the "Location" where the "accident" occurs.

Instead, we will determine the most we will pay by using the following steps:

- a. Divide the Limit of Loss by the product of the Coinsurance percentage multiplied by the total actual cash value of all "Specified Property" at the time of the "accident".
- b. Multiply the total amount of the covered loss by the figure determined in paragraph a., above.
- c. Subtract the applicable deductible from the amount determined in paragraph b., above.
- d. The resulting amount or the Limit of Loss for "Consequential Damage", whichever is less, is the most we will pay. We will not pay for the remainder of the loss.

**2. Payment Limits**

Payment for loss or expense under this endorsement is subject to the following:

- a. Our total payment for any "one accident" for "Consequential Damage" or expenses will not exceed the Limit of Loss shown on the Consequential Damage Schedule. This Limit of Loss is not a part of the Limit of Insurance; it is a separate limit;
- b. Our payment will not increase if more than one insured is shown on the Declarations;
- c. Loss or expense under this endorsement from an "accident" that occurs during the time this coverage is in force may continue beyond the termination or expiration of this coverage. Our liability for that loss or expense is not limited by the termination or expiration.

**3. Reducing Your Loss**

As soon as possible after an "accident" you must make use of every available means to reduce or avert loss partially or completely, including:

- a. Merchandise or other property such as surplus machinery, duplicate parts, equipment, supplies and surplus or reserve stock you own, control or can obtain; and
- b. Salvaging "Specified Property".

**E. DEFINITIONS**

1. "Consequential Damage" means loss due to spoilage from lack of power, light, heat, steam or refrigeration, resulting from an "accident".
2. "Location" means the premises at the address shown on the Consequential Damage Schedule.
3. "Specified property" means only the property described in the schedule of this endorsement.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## COMBINED BUSINESS INTERRUPTION AND EXTRA EXPENSE

This endorsement modifies insurance provided under the following:

BOILER AND MACHINERY COVERAGE FORM

### SCHEDULE\*

Location(s)

Monthly Limit

Dollars (\$ \_\_\_\_\_)

Limit of Loss

Dollars (\$ \_\_\_\_\_)

Business

(Production, Sales, Rents or Income)

Deductible

Time: Days/Hours:

(\_\_\_\_\_)

Dollars:

(\$ \_\_\_\_\_)

Covered "Objects"

---

---

---

---

---

---

\*Information required to complete this schedule, if not shown on this endorsement, will be shown in the Declarations.



**A. COVERAGE**

1. We will pay you for your interruption of "business" and "Extra Expense" during the "period of restoration" provided all of the following requirements are met:
  - a. The interruption and "Extra Expense" must be caused solely by an "accident" to an "object";
  - b. The loss must be as a result of direct physical damage to Covered Property;
  - c. The "accident" must occur during the time this coverage is in force;
  - d. The "object" that has the "accident" must be:
    - (1) Specified as covered in the Combined Business Interruption and Extra Expense Schedule;
    - (2) At a "location" shown in the Combined Business Interruption and Extra Expense Schedule; and
    - (3) In use or connected ready for use.
2. We will pay you:
  - a. The amount of Monthly Limit shown in the Schedule for each "month" your "business" is totally interrupted;
  - b. A part of the Monthly Limit shown in the Combined Business Interruption and Extra Expense Schedule for each "month" during a "partial interruption" of "business" at the "location(s)" specified in the Schedule. We will divide the "partial interruption" by the "average monthly business". The resulting factor will then be multiplied by the Monthly Limit to determine how much we will pay.
  - c. The "Extra Expense" you necessarily incur to operate your "business" in as nearly "normal" a manner as practicable during the "Period of Restoration" following an "accident".

**B. EXCLUSIONS**

All the Exclusions of the Boiler and Machinery Coverage Form apply to loss or expense under this endorsement except:

1. Lack of power, light, heat, steam or refrigeration; or
2. A delay in, or interruption of, any business, manufacturing or process activity.

In addition we will not pay for any loss or expense due to:

3. The interruption of "business" that would not or could not have been carried on if the "accident" had not occurred;
4. Your failure to use due diligence and dispatch and all reasonable means to resume "business" at the "location(s)" shown in the Schedule; and
5. The suspension, lapse or cancellation of a contract following an "accident" extending beyond the time "business" could have resumed if the contract had not lapsed, been suspended or cancelled.

**C. DEDUCTIBLE**

**a. Time Deductible**

If a time deductible is shown in the Business Interruption Schedule, we will not be liable for any loss under this endorsement occurring during that specified time period immediately following the Commencement of Liability.

**b. Dollar Deductible**

If a dollar deductible is shown in the Business Interruption Schedule, we will first subtract Deductible amount shown in the Schedule from the amount we would otherwise pay under this endorsement. We will then pay the amount of loss or expense in excess of the Deductible, up to the applicable Limit of Loss.

**D. CONDITIONS**

The following conditions apply in addition to the Common Policy Conditions and the Boiler and Machinery Conditions:

**1. Notice of "Accident" and Commencement of Liability**

At our expense, you must immediately give notice of "accident" to any of our offices. You must confirm any notice in writing. Our liability under this endorsement starts:

- a. At the time of the "accident"; or
  - b. 24 hours before we receive notice of "accident";
- whichever is later.

## 2. Payment Limits

Payment for loss or expense under this endorsement is subject to the following:

- a. The most we will pay for any one month for one or more "accidents" is the amount shown as the Monthly Limit in the Combined Business Interruption and Extra Expense Schedule;
- b. Our total payment for any "one accident" for interruption of "business" or expenses will not exceed the Limit of Loss shown in Combined Business Interruption and Extra Expense Schedule. This Monthly Limit and Limit of Loss are not a part of the Limit of Insurance. They are separate limits;
- c. Our payment will not increase if more than one insured is shown on the Declarations;
- d. Loss or expense under this endorsement from an "accident" that occurs during the time this coverage is in force may continue beyond the termination or expiration of this coverage. Our liability for that loss or expense is not limited by the termination or expiration;
- e. Our payment under this endorsement for the interruption of "business" will be determined separately for each "month";
- f. The amount of our payment will reflect a deduction for the salvage value of any substitute or temporary equipment remaining after you resume "normal" operations.

## 3. Reducing Your Loss

As soon as possible after an "accident" you must:

- a. Resume "business", partially or completely; and
- b. Make up lost "business" within a reasonable period of time. This reasonable period does not necessarily end when operations are resumed.

You must make use of every available means including:

- c. Working extra time or overtime, either at the "location" or at another location you acquire to carry on the same operations;
- d. The property or services of other concerns; and
- e. Merchandise or other property, such as surplus machinery, duplicate parts, equipment, supplies and surplus or reserve stock you own, control or can obtain.

## E. DEFINITIONS

1. "Average Monthly Business" means the average "business" you had for the two "months" preceding the "month" in which the "accident" occurred.

2. "Business" means:

Word Entered in  
Combined Business  
Interruption and Extra  
Expense Schedule

Meaning of Business

Production

Production at the "location" of your finished product, ready for packing, shipment or sale;

Sales

Gross sales at the "location";

Rents

Rents collectible at the "location";

Income

Gross income at the "location."

3. "Extra Expense":

- a. Means the cost of operating your "business" during the "Period of Restoration" minus what the cost of operating it would have been had no "accident" occurred. Included in "Extra Expense" are such necessary items as: emergency services, merchandise or other property of other concerns.

- b. May also include all or part of the cost of repairing or replacing property damaged or destroyed by an "accident". To qualify as "Extra Expense", the cost must be incurred for the purpose of minimizing the total of our "Extra Expense". The amount that we would include in our "Extra Expense" payment would be equal to:

(1) The savings in "Extra Expense" you have enabled us to realize by having the repairs or replacements made; or

(2) The amount of "Extra Expense" you paid to have the repairs or replacements made;

whichever is less.

- c. Does not mean:

(1) Loss of income; or

(2) Expense in excess of what is necessary to keep your "business" operating in as nearly "normal" a manner as practicable.

4. "Location" means the premises at the address shown on the Combined Business Interruption and Extra Expense Schedule.
5. "Month" means a calendar month beginning at 12.01 A.M. of the first day of the month.
6. "Normal" means the condition that would have existed had no "accident" occurred.
7. "Partial Interruption" means a decrease in "business" during part or all of a "month" determined by subtracting the amount of total "business" at the "location(s)" for each "month" following an "accident" from the "average monthly business".
8. "Period of Restoration" means the period of time that:
  - a. Begins at the time of the commencement of liability; and
  - b. Ends 5 consecutive days after the date when the damaged property at the described "location" is repaired or replaced."Period of Restoration" does not include any increased time period required by, caused by or resulting from enforcement of any item cited by the Ordinance or Law exclusion in the Boiler and Machinery Coverage Form.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## BUSINESS INTERRUPTION—ORDINARY PAYROLL EXPENSE

This endorsement modifies insurance provided under the following:

### BOILER AND MACHINERY COVERAGE FORM

The words - but not your ordinary payroll expense, and - are eliminated from paragraph E. 1. b. (1) of the Definition of actual loss in the Business Interruption - Actual Loss Sustained endorsement and the following is substituted:

including your ordinary payroll expense that must necessarily continue during a total or partial interruption of business to the extent that normal business may be resumed with the same quality of service after the "accident" that existed at the time of the "accident," and

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## BUSINESS INTERRUPTION—REPORT OF VALUES

Complete this endorsement and send it to your Company.

Your Name:

Location:

	Actual Values for 12 Month Period Ending 19	Estimated Values for 12 Month Period Beginning 19
A. Total annual net sales (Gross sales less discounts, returns, bad accounts and prepaid freight, if included in sales). If manufacturing, add increase or subtract decrease in inventory, at net selling price, of finished products during period reported. If rents, net sales means gross rents less discounts, returns, allowance to customers, bad accounts, sales taxes.	\$ _____	\$ _____
B. Add other earnings (if any) derived from operation of the business:		
1. Cash discounts received	_____	_____
2. Commissions or rents from leased departments	_____	_____
3.	_____	_____
C. Total (A. plus B.)	\$ _____	\$ _____
D. Deduct only cost of:		
1. Merchandise sold, including packaging materials	\$ _____	\$ _____
2. Materials and supplies consumed directly in manufacturing the finished product or in supplying services you sold	_____	_____
3. Services purchased from outsiders (not your employees) for resale which do not continue under contract	_____	_____
4. Ordinary payroll expense	_____	_____
5. Total deductions	\$ _____	\$ _____
E. Total net profits, fixed charges and expenses (C. minus D.)	\$ _____	\$ _____
F. Number of working days in period reported	_____	_____

Signature of you or your authorized representative

Date

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## CONDITIONAL SUSPENSION OF COINSURANCE

This endorsement modifies insurance provided under the following:

### BOILER AND MACHINERY COVERAGE FORM

Regarding paragraph D.3. of the Business Interruption - Actual Loss Sustained endorsement, coinsurance is deleted when:

1. The Business Interruption - Report of Values endorsement is attached; and
2. Subsequent Business Interruption - Report of Values endorsements are sent to us when due.

The provisions of this endorsement will become void if you do not send us a Business Interruption - Report of Values endorsement as required.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## COMBINED BUSINESS INTERRUPTION AND EXTRA EXPENSE ACTUAL LOSS

This endorsement modifies insurance provided under the following:

BOILER AND MACHINERY COVERAGE FORM

### SCHEDULE\*

Location(s)

Limit of Loss

Dollars (\$ \_\_\_\_\_)

\_\_\_\_\_ Ordinary Payroll Coverage (applies only when an "X" is inserted)

Deductible

Time: Days/Hours

( \_\_\_\_\_ )

Dollars

( \$ \_\_\_\_\_ )

Multiple of Daily Value

( \_\_\_\_\_ )

Optional Annual Report Date \_\_\_\_\_

Covered "Objects"

---

---

---

---

---

---

---

---

---

---

\*Information required to complete this schedule, if not shown on this endorsement, will be shown in the Declarations.

**A. COVERAGE**

1. We will pay you for your "Actual Loss" and "Extra Expense" during the "Period of Restoration" provided all of the following requirements are met:
  - a. The "Actual Loss" and "Extra Expense" must be caused solely by an "accident" to an "object";
  - b. The loss must be as a result of direct physical damage to Covered Property;
  - c. The "accident" must occur during the time this coverage is in force.
  - d. The "object" that has the "accident" must be:

(1) Specified as covered in the Combined Business Interruption and Extra Expense Schedule;

(2) At a "location" shown in the Combined Business Interruption and Extra Expense Schedule; and

(3) In use or connected ready for use.

2. We will pay:

- a. Your "actual loss" from a total or partial interruption of business; and
- b. The "Extra Expense" you necessarily incur to operate your "Business" as nearly "normal" as practicable during the "Period of Restoration" following an "accident."

We will consider the actual experience of your business before the "accident" and the probable experience you would have had without the "accident" in determining the amount of our payment.

3. Ordinary Payroll Coverage - If Ordinary Payroll coverage is shown in the Business Interruption Schedule, the words - but not your ordinary payroll expense - are deleted from the definition of "actual loss."

**B. EXCLUSIONS**

All the Exclusions of the Boiler and Machinery Coverage Form apply to loss or expense under this coverage, except:

1. Lack of power, light, heat, steam or refrigeration; or
2. A delay in, or interruption of, any business, manufacturing or process activity.

In addition we will not pay for any loss or expense due to:

3. The interruption of business that would not or could not have been carried on if the "accident" had not occurred;
4. Your failure to use due diligence and dispatch and all reasonable means to resume business as nearly "normal" as practicable at the location(s) shown in the Schedule; and
5. The suspension, lapse or cancellation of a contract following an "accident" extending beyond the time business could have resumed if the contract had not lapsed, been suspended or cancelled.

**C. DEDUCTIBLE**

1. Time Deductible

If a time deductible is shown in the Business Interruption Schedule, we will not be liable for any loss under this endorsement occurring during that specified time period immediately following the Commencement of Liability.

2. Dollar Deductible

If a dollar deductible is shown in the Business Interruption Schedule, we will first subtract the deductible amount shown in the schedule from the amount we would otherwise pay under this endorsement. We will then pay the amount of loss or expense in excess of the deductible, up to the applicable Limit of Loss.

3. Multiple of Daily Value Deductible

If a multiple of daily value is shown in the Business Interruption Schedule, we will first subtract from the total amount we would otherwise pay, a dollar amount that is equal to the daily value during the period of interruption at the "location(s)" where the loss occurred, multiplied by the multiple specified on the schedule. The daily value is the amount that would have been earned each working day had no "accident" occurred.

**D. CONDITIONS**

The following conditions apply in addition to the Common Policy Conditions and the Boiler and Machinery Conditions:

1. Adjustment of Premium

Upon receipt of the annual reports you furnish us, we will determine the amount of premium we earned for the past year. If the amount determined is more than the premium we have already charged for this coverage, you must



pay the difference. If the amount determined is less than the premium we originally charged, we will refund the difference. However, the amount we return will not exceed 75% of the premium we originally charged.

**2. Annual Reports**

You must complete the Business Interruption - Report of Values worksheet once each year. Your initial report is due on the effective date of the policy. Subsequent reports are due on each anniversary of the policy, unless a date is shown on the Schedule. Your reports must reach us within three months of these due dates.

Statements of value may be substituted for the completed Business Interruption - Report of Values worksheet if the values on the statements are the same as those required by the worksheet.

**3. Coinsurance**

This Coinsurance condition applies only if we did not receive your due report within three months of the due date.

We will not pay the full amount of any loss if the Business Interruption "annual value" at the time of loss is greater than the "estimated annual value" shown in your previous report. Instead, we will determine the most we will pay using the following steps:

- a. Divide the "estimated annual value" last reported to us by the "annual value" at the time of the "accident";
- b. Multiply the total amount of the covered loss by the figure determined in paragraph a. above;
- c. Subtract the applicable deductible from the amount determined in paragraph b. above.

The resulting amount or the Limit of Loss for Business Interruption, whichever is less, is the most we will pay. We will not pay for the remainder of the loss.

If more than one location is shown in the Schedule for this coverage, this Coinsurance Condition applies separately to each "location".

**4. Notice of "Accident" and Commencement of Liability**

At our expense, you must immediately give notice of "accident" to any of our offices. You must confirm that notice in writing. Our liability under this coverage starts:

- a. At the time of the "accident"; or
- b. Twenty-four hours before we receive notice of "accident";

whichever is later.

**5. Payment Limits**

Payment for loss or expense under this endorsement is subject to the following:

- a. Our total payment for any "one accident" for interruption of business, or for expenses will not exceed the Limit of Loss shown in Combined Business Interruption and Extra Expense Schedule. This Limit of Loss is not part of the Limit of Insurance; it is a separate limit;
- b. Our payment will not increase if more than one insured is shown on the Declarations;
- c. Loss or expense under this endorsement from an "accident" that occurs during the time this endorsement is in force may continue beyond the termination or expiration of this endorsement. Our liability for that loss or expense is not limited by the termination or expiration;
- d. The amount of our payment will reflect a deductible for the salvage value of any substitute or temporary property remaining after you resume "normal" operations.

**6. Reducing Your Loss**

As soon as possible after an "accident", you must:

- a. Resume business, partially or completely; and
- b. Make up lost business within a reasonable period of time. This reasonable period does not necessarily end when operations are resumed.
- c. Make use of every available means, including:
  - (1) Working extra time or overtime, either at the "location" or at another location you acquire to carry on the same operations;
  - (2) The property or services of other concerns; and
  - (3) Merchandise or other property, such as surplus machinery, duplicate parts, equipment, supplies and surplus or reserve stock you own, control or can obtain.

**E. DEFINITIONS**

The following definitions apply in addition to the Definitions of the Boiler and Machinery Coverage Form and all provisions of any Object Definitions endorsements shown in the Declarations:

**1. "Actual loss" means the sum of:**

- a. The net profits you fail to earn because of business interruption resulting from an "accident"; and
- b. Whatever part of the following fixed charges and expenses the business failed to earn but would have earned if there had been no "accident":
  - (1) Salaries and wages of officers, executives, employees under contract and other essential employees, as well as pensions and directors' fee but not your ordinary payroll expense; and
  - (2) Manufacturing, selling, administrative expenses and any other items contributing to your overhead expenses.

In calculating the "actual loss", we will take into account the actual experience of your business before the "accident" and the probable experience you would have had without the "accident".

- 2. "Annual Value" means the sum of net profits and "fixed charges and expenses" that would have been earned had the "accident" not occurred.**
- 3. "Estimated Annual Value" means the sum of net profits and "fixed charges and expenses" as estimated by you in the most recent annual report.**
- 4. "Fixed charges and expenses" means the sum of the following:**
  - a. Salaries and wages of officers, executives, employees under contract and other essential employees, as well as pensions and directors' fees but not your ordinary payroll expense; and
  - b. Manufacturing, selling, administrative expenses and any other items contributing to your overhead expenses.

**5. "Extra Expense":**

- a. Means the cost of operating your "business" during the "Period of Restoration" minus what the cost of operating it would have been had no "accident" occurred. Included in "Extra Expense" are such necessary items as: emergency services, merchandise or other property of other concerns.
- b. May also include all or part of the cost of repairing or replacing property damaged or destroyed by an "accident". To qualify as "Extra Expense", the cost must be incurred for the purpose of minimizing the total of our "Extra Expense" payment. The amount that we would include in our "Extra Expense" payment would be equal to:
  - (1) The savings in "Extra Expense" you have enabled us to realize by having the repairs or replacements made; or
  - (2) The amount of "Extra Expense" you paid to have the repairs or replacements made;whichever is less.
- c. Does not mean:
  - (1) Loss of income; or
  - (2) Expense in excess of that which is necessary to keep your "Business" operating in as nearly "normal" a manner as practicable.

- 6. "Location" means the premises at the address shown on the Combined Business Interruption and Extra Expense Schedule.**
- 7. "Normal" means the condition that would have existed had no "accident" occurred.**
- 8. "Period of Restoration" means the period of time that:**

- a. Begins at the time of the commencement of liability; and
- b. Ends 5 consecutive days after the date when the damaged property at the described "location" is repaired or replaced.

"Period of Restoration" does not include any increased time period required by, caused by or resulting from enforcement of any item cited by the Ordinance or Law exclusion in the Boiler and Machinery Coverage Form.

Acct. No. \_\_\_\_\_  
Policy No. \_\_\_\_\_  
Date \_\_\_\_\_

## EXTRA EXPENSE VALUES WORK SHEET

Insured \_\_\_\_\_  
Location \_\_\_\_\_  
\_\_\_\_\_

### TO THE INSURANCE COMPANY

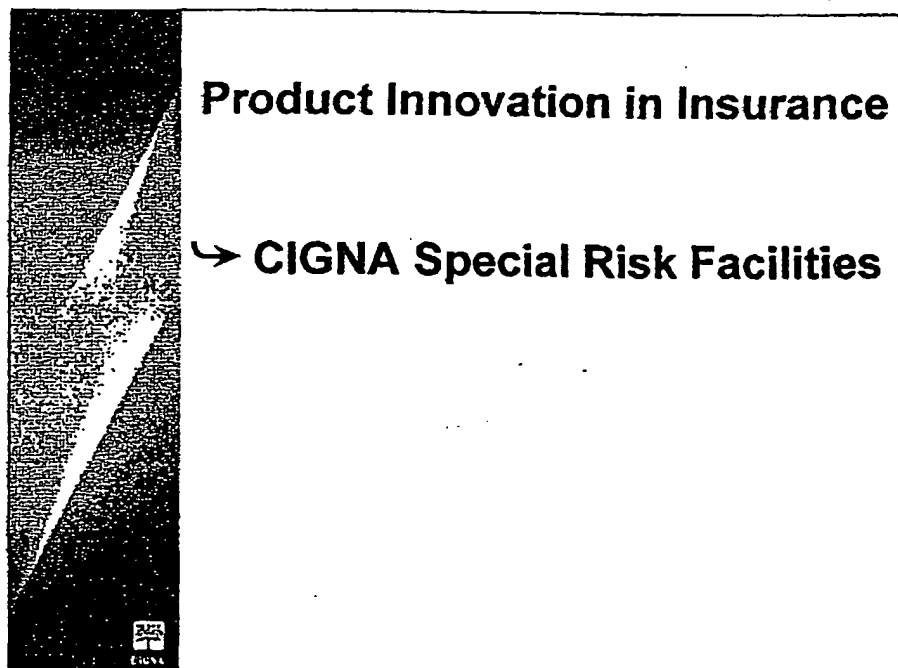
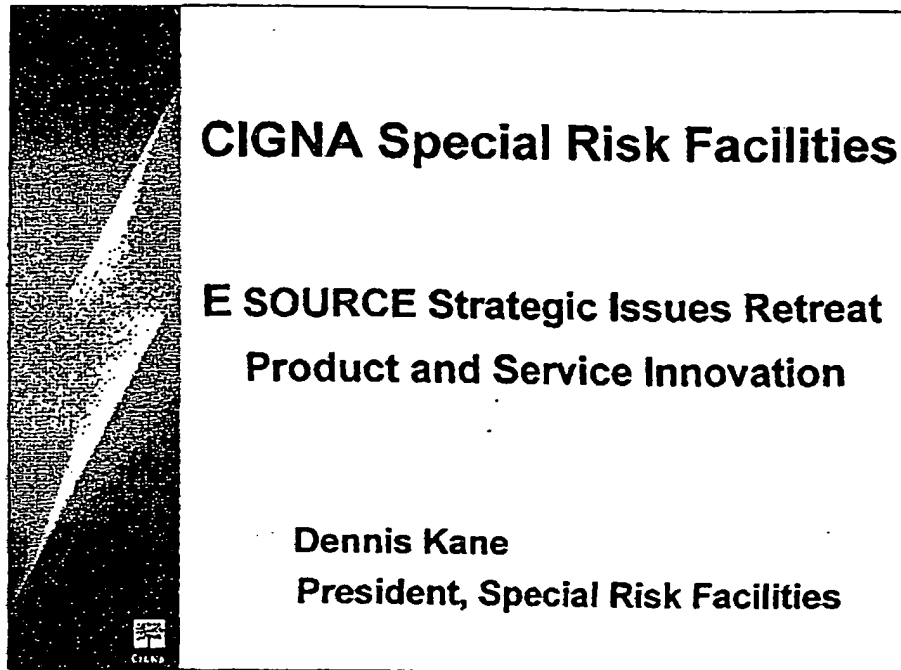
We have indicated below some estimated extra expenses needed over and above normal if alternate facilities or equipment are used.

1. Rental of temporary premises	\$ _____
2. Rental of temporary equipment	\$ _____
3. Cost of moving (to and from)	\$ _____
4. Preparation of temporary premises	\$ _____
5. Telephone, telegraph and other similar installations	\$ _____
6. Extra labor - overtime	\$ _____
7. Transportation expenses	\$ _____
8. Heat, light and power - temporary location	\$ _____
9. Watchperson service	\$ _____
10. Police protection	\$ _____
11. Extra engineering service	\$ _____
12. Additional manufacturing or operations expense	\$ _____
13. Other	\$ _____
	\$ _____
	\$ _____
Total	\$ _____

Estimated Extra Expense Period

Days \_\_\_\_\_

(Signature of Official and Title) \_\_\_\_\_



# Aligning the Product & Market Mix

## MARKETS

### CURRENT

### NEW

NEW  
PRODUCTS  
CURRENT

Cash Flow Option

Retroactive Deductible

Sliding Retention

Flexible Collateral Product

Claim Credit Line

Risk Advantage

Global Casualty

Global Property

Captives, PLR's

Risk Financing

Risk Solutions

Combined Risks

Asset Mgmt Insurance

Crisis Management


Integrated Disability

**CIGNA Power Products**

Unbundled Fronting


Unbundled Services

The CIGNA logo, featuring a stylized 'C' and the word 'CIGNA' below it.



## New Risks ... New Solutions

- Risk Response Options
- Insurance Advantages
- Case Studies





## **The Need for Risk Response**

### **→ Changing Transaction Structures**

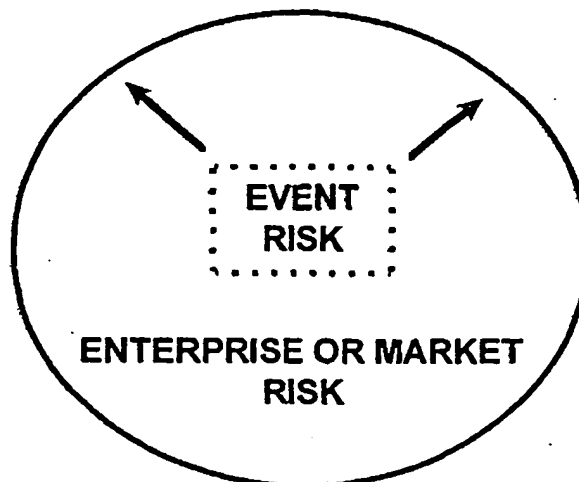
- A Key Building Block to Profit
- New and More Varied
- Create Exposure to New Risk

### **→ Risk Response Characteristics**

- Static
- Dynamic



## **Expanded Insurance Horizons**



## The "Risk Review"

### RANDOM SHOCK TO SUPPLY

- Unit Outages & Deratings
- Power Quality concerns

→ And the Effects:

### TRANSMISSION CONSTRAINTS

- Distance limitations
- Inconsistent ISO protocols
- OASIS problems

### MARKET PRICE SPIKES

- Weather driven surges
- Load Aggregation
- Load Profiling/Balancing
- Control Area Security

### FORCE MAJEURE CLAUSES

### MODEL RISK

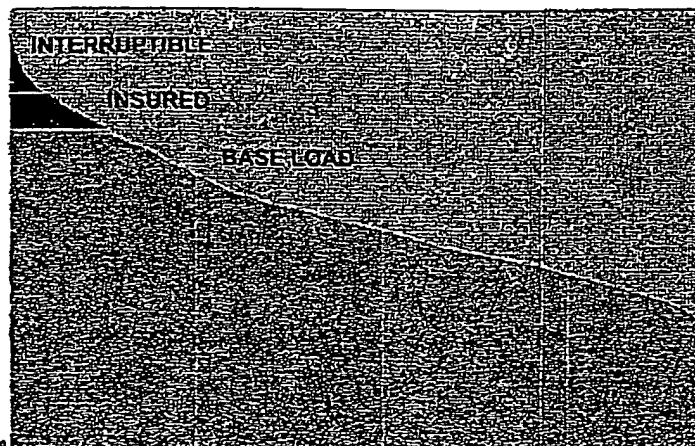
### COUNTERPARTY RISK

- Budget overruns
- Deals not getting done
- Unanticipated cost increases

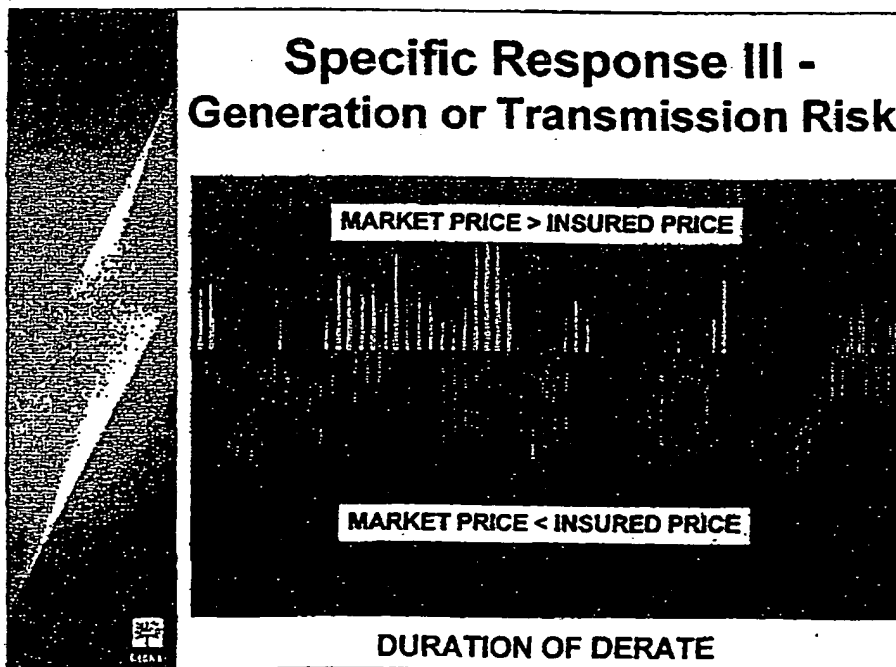
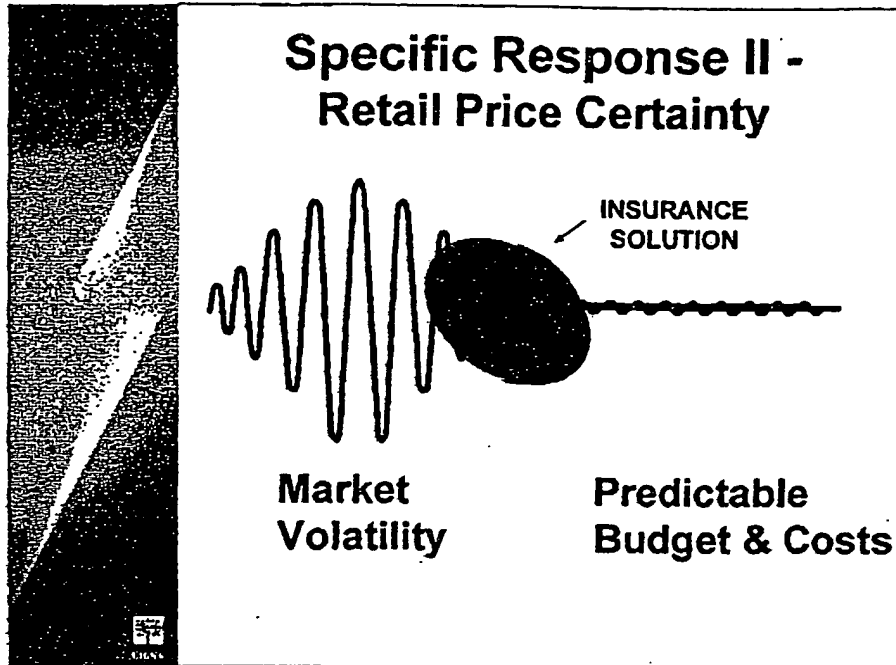


- Destroy impact of "value adds"
- Loss of franchise & customers

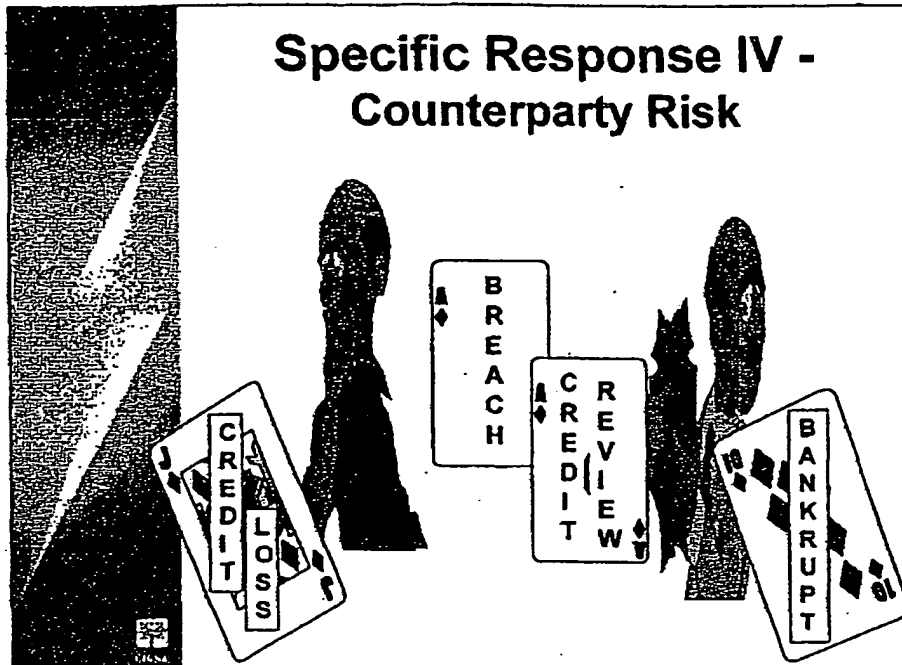
## Specific Response I - Wholesale Price Protection



LOAD DURATION CURVE







### Other CIGNA Products

- ↳ **Loss of Supply (Outage Insurance)**
  - Distributed Generation
- ↳ **Combined Risk**
  - Excess Storm Damage
  - Weather Derivatives
- ↳ **Other:**
  - Bill Protection & Appliance Warranty
  - Transaction Information Services

A small logo is visible in the bottom left corner of the graphic.



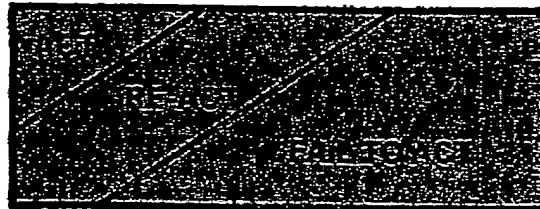
## Underscore Flexibility

- ↳ Tied to Specific exposures
- ↳ No Basis Risk
- ↳ Pay for What You Need
- ↳ CIGNA Resources & Market Image



## Conclusion

- ↳ Times of Tremendous Change
  - Race Goes to the Swift



- ↳ CIGNA can insure those who Act
  - And help them to WIN !



# **CIGNA Power Products**

***Creative Solutions for New Market Needs***



6/7/3 (Item 1 from file: 148)  
DIALOG(R) File 148:Gale Group Trade & Industry DB  
(c)2001 The Gale Group. All rts. reserv.

08835335 SUPPLIER NUMBER: 18483828 (THIS IS THE FULL TEXT)  
Not so risky business: an increase in insurance capacity and an improved loss history are leading to new products and approaches for the chemical industry. (Mid Year Review '96)  
Fitzgerald, Patrick  
Chemical Marketing Reporter, v250, n3, pSR18(1)  
July 15, 1996

TEXT:

An increase in insurance capacity and an improved loss history are leading to new products and approaches for the chemical industry.

The playing field is changing rapidly in the chemical insurance market, and chemical producers are benefiting. Improved loss experience, new insurance capacity and more competition between underwriters are reducing prices for traditional policies. To secure market share, insurers are willing to provide multi-line policies with multi-year commitments and fixed pricing. Insurance and capital markets are converging, resulting in hybrid policies which "blend" sophisticated financial features and traditional insurance, which offer the potential for significant savings.

Increasingly, chemical companies are assuming larger retentions. Catastrophic losses are infrequent but require coverage in excess of \$1 billion. "Operating an oil rig or a petrochemical facility is considerably more complex than running most commercial operations," says Tom Kaiser, president of the energy group at New York-based American International Group (AIG), a major underwriter of chemical risk. He notes that risks are more concentrated in individual locations with higher values per insured location.

The current market prices for insurance reflect growing competition between insurers and an increase in capacity. "From the low levels of capacity and high rates of around three years ago, rates have come down and capacity has returned," says Tom Dickson, head of global insurance at Centre Reinsurance, a member of Zurich Insurance Group. "It's hard to say what is driving this, but maybe insurers are targeting large risks, and the recent loss experience has been pretty good, with no major catastrophes such as Piper Alpha, Exxon Valdez or the Phillips's explosion." The explosion at Phillips's Pasadena, Tex., polyethylene plant in the early 90s was the largest non-marine loss ever and was responsible for scaring some underwriters out of the market, according to industry observers.

"There is some increased capacity available to the chemical industry in property and casualty but not much more for pollution," notes Paul Brink, director of corporate risk and insurance at Dow Chemical.

"Companies are relying on high retentions or captives (companies used to insure specific risks) and going to alternative markets, including traditional reinsurance companies, for catastrophic-type risks," adds Edward Guzik, managing director of New York-based Alexander Capital Consultants, a division of Alexander & Alexander Services, Inc. "The US property and casualty insurance industry has approximately \$200 billion of US-based capital, and the global insurance industry has in the neighborhood of \$400 billion. The capital markets have \$15 trillion in capital. Who would you go to for money?" ~~Because of their large size, major chemical and petrochemical companies are buying less insurance and maintaining higher retentions.~~ "Some companies are larger than their insurers," notes Mr. Dickson, "and they are willing to retain large risks, if they can manage them effectively rather than transfer them outright."

As a result of these higher retentions, underwriters are finding chemical risk more attractive. "Underwriters are viewing these accounts as primarily catastrophic risk instead of chemical risk," says Mr. Kaiser. "Large chemical and petrochemical companies have determined that since they have such high retentions, they want to put property and casualty together or onshore and offshore with casualty. They want to know that after they've exceeded a certain amount, they are covered."

Several underwriters have introduced specific insurance products that address chemical companies' increased retentions and their desire to strengthen relationships with insurers. This year, Zurich-based Swiss Re and Alexander Capital Consultants introduced an insurance package named Beta--developed in cooperation with a consortium of chemical, pharmaceutical and energy firms--which provides a minimum \$300 million on a perloss basis (for the combination of property and liability) and \$600 million in aggregate limits over three years.

"It is possible to extend the program for a subsequent three-year term, which would then provide a maximum \$1.2 billion over six years," notes Mr. Guzik. Cigna Property and Casualty's XL Risk Solutions is designed to encourage customers to take a higher risk retention. The product has annual exposure limits of \$400 million.

Other major underwriters of chemical risk such as AIG and Zurich also offer combined policies tailored to specific customers. "In conjunction with Zurich Global Energy Group, we provide multiple year programs that combine a whole range of insurance coverages," says Centre Re's Mr. Dickson. "This is typically a blended program with some element of loss-sensitive pricing at the lower end and guaranteed cost capacity at the higher end." Often, these programs have aggregate limits less than the sum of the total traditional limits over multiple years that reduce the cost to the company and provide enough limit to handle catastrophic loss, he notes. "This approach can be provided with front end servicing, which creates an integrated relationship between insurer and the company."

Traditional insurance is typically written on a one-year basis, with various lines of coverage--property, casualty, excess, environmental, directors' and officers' accountability, employee benefits--handled by separate departments. Apart from the difficulty of coordinating coverage, these policies, each with a separate deductible, must be rewritten each year. The time-consuming process of renegotiating policies every year increases costs.

The development of multi-year, multi-line policies--stimulated by increasing sophistication and information technology expansion--is contributing to significant improvements in the efficiency of catastrophic insurance protection, says Mr. Guzik.

"Improved efficiency results from loss portfolio efficiency through cross-coverage spread of risk and extended time horizons; cost of capital efficiency (allocation of underwriting capacity on the basis of risk-adjusted capital); and frictional cost efficiency (significant net risk taking, reducing reinsurance brokering, and flexible options for extension on a preagreed price basis)."

One reason for the acceptance of alternative programs is that corporate risk managers are increasingly being recruited from companies' financial departments. "These corporations' risk managers are driving the blend of traditional insurance policies and financial products," says Mr. Kaiser. Chemical companies' improved loss experience, and the concomitant acceptance of financial features, points to the continued blending of insurance and financial instruments. "We are seeing a fundamental transformation of the insurance industry regarding the convergence of traditional insurance and capital market products," says Dow's Mr. Brink.

To what extent the improved loss experience for chemical risk is attributable to government and industry initiatives such as OSHA, ISO and Responsible Care is debatable. "One could hope that the insurance industry is more comfortable with the risks associated with the chemical sector," says Mr. Brink. "This may be one of the reasons there seems to be more capacity available at his time."

However, a couple of major losses could scare off underwriters. "In the last three or four years, there has been a decline in overall losses in the chemical sector, but history has shown us that 'naive' capacity dries up real quickly after one or two large losses," notes AIG's Mr. Kaiser. "Some underwriters are opportunistic in the sense they see money to be made now, but if there is a large loss, they put their tail between their legs and get out of the market."

The absence of 'naive' capacity, however, should not halt the acceptance of alternative risk and captives. Given the high retentions of major chemical companies, and the relative infrequency of catastrophic

losses, products combining insurance and financial instruments, such as blends, combined risk hedges and swaps, will continue to flourish. Blended products combine traditional insurance with the investment component of finite risk. "The result is a product that provides balance sheet management by addressing credit and timing as well as traditional risk transfer," says AIG's Mr. Kaiser. Blended products allow companies to cover difficult-to-insure risks as well as insulate them from unpredictable insurance market swings. "These products can stabilize premiums and cash flow over a fixed period of time," he says.

One further innovation is the combined risk approach, which addresses a company's ability to fund its own losses during periods of high prices and profits by using a financial index instrument in combination with an insurance policy. Combined risk has a double trigger, meaning two or more factors must occur simultaneously for the policyholder to obtain coverage.

For example, a loss must exceed a certain amount, and the price of a commodity must decline more than a specified amount over a period of time. Insurance is arranged as standby protection if market conditions increase a company's financial vulnerability. "Depending on the triggers, combined risk insurance can be cheaper than traditional coverage," says Mr. Kaiser. "It also improves the attractiveness of an excess loss layer, which might not be economical or practical with traditional primary coverage."

Other approaches attractive to chemical companies include weather swaps and hedges, and they are increasingly being incorporated into insurance policies, says Mr. Kaiser.

Weather swaps allow a company to exchange a series of fixed cash flows for a series of variable cash flows dependent on an index based on weather statistics. "The weather swap protects against a fall in revenue or profits, an increase in costs or a loss in assets due to adverse weather conditions" he says.

COPYRIGHT 1996 Schnell Publishing Company Inc.

?

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☒ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**